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The Impact of Displacement on Child Health: Evidence from Colombia's DHS 2010

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Abstract

This paper investigates the causal impact of displacement on health outcomes for Colombian children of different age cohorts. It uses the Colombian Demographic and Health Survey 2010, which provides both a number of health outcomes and information about displacement of households. Two different empirical strategies are employed to identify the impact of displacement on child health, namely a linear regression model and propensity score matching. In order to capture different dimensions of health, four health outcomes are used as dependent variables: (i) height-for-age z-scores; (ii) subjective health status; (iii) affiliation to a health insurance; and (iv) having a health problem last month. Overall, a negative relationship between displacement and child health is documented. In line with findings from African and Asian countries, displacement increases the likelihood for malnutrition for young children and primary school children. Moreover, being displaced leads to a lower subjective health status for children from all age cohorts. Yet, displaced children are not affected by health problems significantly more often than non-displaced children. Last, but not least, displaced children from all age cohorts are significantly less likely to have health insurance.

JEL Classification Codes: C21, D19, I13, O54

Key Words: Child Health, Displacement, Armed Conflict, Colombia, Propensity Score Matching

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1. Introduction

Child health has a great and long lasting influence on cognitive skills and associated socioeconomic outcomes like educational attainment, income, labor market participation and adult health in later life (Case et al. 2002, Case et al. 2005, Currie and Stabile 2004, Glewwe et al. 2001, Marmot et al. 2001, Almond and Currie 2010, 2011, Case and Paxson 2010, Currie and Hyson 1999, Kuh and Wadsworth 1999, Maurer 2010, Maluccio et al. 2006, van den Berg 2006). As a consequence, children with adverse health outcomes are more likely to leave school earlier, earn less and are more prone to certain diseases in their later life. When they themselves have children, these children will grow up in a disadvantaged socioeconomic environment making them more vulnerable for malnutrition and health problems. In this way, a vicious circle is established. Breaking this vicious circle is one reason why child health should be of great relevance for policy makers. Therefore, researchers are analyzing the main determinants of child health. By understanding these drivers, policy makers can design programs that improve child health leading to healthier and more capable adults, which is beneficial for the whole country.

Until recently, the majority of research on child health determinants was conducted in industrialized countries due to limited data availability in developing countries. Many of these studies focus on socioeconomic determinants of child health – especially the so-called child health / family income gradient that is extensively investigated (see for example Case et al. 2002, Currie et al. 2007). Since 2000 a growing body of literature on child health in developing countries has emerged. Determinants are broader than for industrialized countries and include – in addition to socioeconomic variables and health-income gradient - community characteristics, development program effects and certain types of shocks like famines, crop losses, pollution, rainfall and drought (Chen et al. 2010, Chen and Zhou 2007, Chen and Li 2009, Meng and Qian 2006, Jayachandran 2009, Maccini and Yang 2009, Hoddinott and Kinsey 2001, Linnemayr et al. 2008, David et al. 2004, Alderman et al. 2006, Currie and Vogl 2012, Michaelsen and Tolan 2012).

Starting in about 2008, armed conflict emerged in the economic literature as a new exogenous shock to child health. Until now, to the best of my knowledge, research in this

area is mainly restricted to African (Akresh et al. 2011, 2012a and 2012b, Bundervoet et al. 2009, Bundervoet 2012, Minou and Shemyakina 2012) and Asian (Guerrero-Serdán 2009, Valente 2001, Parlow 2012) countries, with the exception of Camacho's work (2008) on the impact of terrorist attacks on birth weight in Colombia. Results show unambiguously that conflict negatively impacts child health. Most papers use a difference in difference approach comparing nutritional status of preschool children and babies (measured as height-for-age z-scores or birth weight) across time in conflict and peaceful areas. Few other indicators for child health are used in the conflict setting, with the exception of Valente (2011) and Parlow (2012).

This paper makes several contributions to the child health and conflict literature. First, it uses multiple dimensions of child health in order to get a clearer picture on the impact of displacement on child health. These dimensions capture different aspects of health: (i) nutritional status; (ii) subjective health; (iii) health insurance membership; and (iv) having health problems. As in other papers on conflict and child health, height-for-age z-scores are used to measure children's long-term nutritional status. One great advantage of this measure is its objectivity since weight and height are normally recorded by the interviewers and do not rely on respondent's information only. A disadvantage of this measure is that it does not include other, more subtle aspects, such as mental health, social and cognitive development or overall wellbeing, which are quite likely to be affected by conflict. For this reason, a subjective health measure is included. The respective variable asks parents to rate their child's health on a scale from one (excellent) to five (bad). A benefit of this approach is that parents are probably the individuals who best know their child's health. However, it might be that their statement of their child's subjective health is not as objective as height-for-age z-scores, but influenced by parents' own health and living circumstances. A measurement in between regarding objectivity is the question about the health problems of their child over the last month. It is less objective than height-for-age z-scores because it relies on the respondent's information and observations but it is more objective than the question about subjective health because it asks for concrete health issues, which are probably easier to answer than ranking the overall health status.

The last dimension tackles access to the health care system, which is an important factor for having a healthy child. If a child is not a member of a health insurance, they are less likely to participate in preventive programs or to receive treatment in the event of illness or accident because the family cannot afford to pay for it. This situation is especially difficult for poor, displaced families. As I show in section 3, access to the subsidized health care system is linked to specific municipalities in Colombia, which makes it difficult to keep health insurance membership after displacement.

Second, regarding the methodology, this paper deviates from most papers in this area of research. Instead of using the difference in difference methodology, linear regression and propensity score matching are employed in this analysis. Particularly in times of conflict, children from peaceful and violent areas might not only differ regarding their war exposure but in other characteristics such as socioeconomic status, ethnicity and educational background. Hence, it is important to control for this possibility in order to get unbiased estimates.

Third, due to the rich survey data that includes information of children's displacement status, this paper measures directly the exposure to conflict for each individual. Otherwise, it would not be possible to accurately know if a family member experienced exposure to conflict because even in areas with a high number of conflict incidents, it could be that families are nevertheless not influenced by conflict or its consequences. Hence, this paper resolves some issues of previous research resulting from using conflict data on municipality or even departmental level.

Fourth, since health data is available for children of all ages, this paper analyzes how the impact of displacement differs between age groups. It is valuable to know whether conflict affects children differently depending on age, thus allowing for age appropriate policy measures to be implemented. Yet the majority of research undertaken in this area so far concentrates on the impact of conflict exposure in utero or early childhood.

Last, but not least, this paper contributes to the health and conflict literature on Latin American countries, a region where empirical evidence on this topic is still scarce, with the exception of Camacho (2008).

In line with previous findings, results suggest a negative impact of conflict on child health, with some differences between age cohorts. Displaced children less than 12 years of age display lower height-for-age z-scores, indicating a poorer nutritional status compared to non-displaced children of this age group. Yet, teenagers do not experience a significant effect on displacement on height-for-age standard deviations. Exposure to displacement leads to a lower subjective health status for children from all age cohorts. Together with the result that being displaced does not raise the probability of suffering from health problems significantly (except for children aged 5-12 in case of OLS estimates), this implies that bad subjective health is not limited to acute illnesses but incorporates facets beyond physical health. Due to the dependence of a subsidized health insurance from native municipalities, displacement often interrupts the affiliation to a health insurance. As a consequence, displaced children from all age cohorts are uninsured significantly more often than non-displaced children.

The remainder of this paper is organized as follows. In the next section, I review the literature of the impact of conflict on child health. Section three gives a brief overview about health and access to the health care system of displaced children in Colombia. In section four, I present the data used for the analysis. Section five introduces the empirical strategy, with results presented in section six. Finally, section seven concludes.

2. Literature Review: Conflict and Child Health

Since 2008, in the economic and sociological literature, there is a growing interest in the impact of conflict on child health. As noted in the introduction, the majority of studies focus on African and Asian countries. One reason for this development might be that more of these countries have been affected by war than countries in other regions and, thus, they provide a “good” environment for this kind of analysis. The only known exception is Camacho (2008) for the case of Colombia.

Literature in this research area can be grouped into three categories: (i) impact of conflict experienced in utero on birth weight; (ii) influence of conflict on health in early childhood measured as height-for-age-z-scores; and (iii) effect of exposure to conflict on child health in later life. The majority of studies have some features in common. First, they use single and objective measures for child health, such as birth weight or height-for-age-z-scores. To the best of my knowledge, subjective measures or access to the health care system are not used. Second, they combine household data (including child health) with conflict data sets. Third, as an identification strategy, they exploit the exogenous variation of timing and location of conflict. Fourth, they arrive at the same conclusion: conflict negatively impacts child health. Despite the great similarities, details of the studies vary from each other depending on the focus of the study, such as gender bias, education, household issues or crop failure.

The channels through which conflict influences child health are different for each category, as I discuss later. This paper falls into the second category, although I will use more measurements for child health than just height-for-age-z-scores. Moreover, I extend the analysis to include older children. In the following, I briefly summarize the literature for each category following the natural order of life from in utero to childhood and adolescence. Studies of the first category highlight the impact of stress due to conflict on pregnant mothers. This stress is passed to the embryo in utero negatively influencing his development, which results in miscarriage or lower birth weight.

Camacho's (2008) work on Colombia is one of the first examples for this type of research. She investigates the impact of prenatal stress caused by conflict. She uses landmine explosions during pregnancy as an indicator for conflict and birth weight as a measure for child health. Her results show that, consistent with the literature on prenatal stress and birth outcomes, babies who experienced landmine explosion in utero are born with lower birth weight than babies in peaceful municipalities who did not experience such explosions.

The impact of exposure to violent conflict in utero, in the case of Nepali insurgency, was examined by Valente (2011). Results indicate that women living in areas with higher levels of violence are more likely to suffer from miscarriages or preterm births. Since the use of

health care services does not significantly decrease in times of conflict it is likely that these adverse effects are due to stress triggered by the insurgency.

Mansour and Rees (2012) find the same results as Camacho (2008), but for Palestine: children whose mothers experienced the Intifada were more likely to be born with a birth weight less than 2500g. Like Camacho (2008) and Valente (2011), they attribute part of the results to the psychological stress the mother underwent during the Intifada.

The impact of “milder” forms of conflict on child health is tested by Parlow (2012). He looks at the Kashmir insurgency and concludes that experiencing the insurgency in utero indeed decreases height-for-age-z-scores after birth, with those babies born closer to peaks of violence more strongly affected. An additional finding is that girls are slightly more affected by the negative consequence of violence since parents have a preference for boys, especially in rural areas.

One of the earliest papers on conflict and child health falling into the second category is by Bundervoet et al. (2009). They analyze the impact of conflict on child health in Burundi using height-for-age z-scores. In addition to the negative impact of conflict on nutritional status, they find that the impact increases with longer exposure to conflict. They suggest two channels through which conflict can influence child health: (i) forced displacement; and (ii) theft and burning of crops. Both lead to a decrease of food availability, which consequently makes children more prone to disease.

Akresh et al. (2011) compare two different negative shocks, namely conflict and crop failure, in the early life of children in Rwanda. Results show that both shocks have a negative impact on child health – measured as height-for-age z-score – but the magnitude of the shock depends on gender and poverty status. While children suffer equally from the negative influence of conflict, independent of gender and poverty status, girls from poor families suffer the most from crop failure. Crop failure has little impact on children from richer families and boys from poor families. This finding suggests that conflict was a sudden and unexpected shock and families could not prepare for it and protect their children. Regarding crop failure, however, rich families are able to cushion shocks and poor families decide to

give more available food to boys than to girls. This clearly shows that it is not just the shock, *per se*, that negatively impacts child health, but that the nature of a shock (sudden and unexpected so that people cannot accumulate assets to protect themselves) and human behavior (treat boys and girls unequally) also matters.

Using war exposure and displacement as conflict variable, Akresh et al. (2012a) investigate the influence of the Eritrean-Ethiopian conflict on children in Eritrea. They sought to observe whether there is a gender bias, such that girls are affected more negatively by conflict. Results suggest that experiencing conflict in early childhood increases the likelihood of malnutrition. However, as in Akresh et al. (2009) and contrary to Parlow (2012), there is no evidence of discrimination against girls. Hence it seems that unlike other shocks, conflict is a shock happening to all families to a similar extent.

Minoiu and Shemyakina (2012) examine the effect of conflict in Cote d'Ivoire on children, concluding that conflict-affected children experienced significant adverse health outcomes compared to children living in less affected areas. In line with Akresh et al. (2009, 2012a), they find no evidence for a discrimination against girls. Additionally, they make the same observation as Bundervoet (2009), namely that impact severity increases as the duration of war exposure increases. They explain the negative impact of conflict by displacement, health impairments and economic losses of households favoring adverse health outcomes.

Using Iraq, Guerrero-Serdan (2009) conducts a detailed analysis on the effects of conflict on nutritional and health outcomes of young children. Just like Bundervoet (2012), Akresh et al. (2009, 2012a) and Minoiu and Shemyakina (2012), her results show that children affected by war at early age display lower height-for-age z-scores. Surprisingly, and in contrast to Parlow (2012), girls in Iraq are less likely to be affected by stunting in conflict areas, which suggests that they might be biologically less fragile than boys of the same age. Moreover, she finds that children in violent areas are more likely to get diarrhea, probably due to poor sanitation services, an outcome also found by Parlow (2012).

Research falling into the third category goes one step further by analyzing the negative influence of conflict on child health in later life. Bundervoet (2012) finds for Burundi that

malnourished children at baseline were less likely to enroll in school and, if enrolled, did not complete as much education. This impact is stronger for older children who suffered war exposure in early childhood. His conclusion is that war exposure leads to bad health (measured as malnutrition), which leads to low educational attainment. He suggests that this development might be partly responsible for the long recovery after a war. Therefore, chronic malnutrition in childhood should be considered to be a serious problem by humanitarian and aid agencies.

Akresh et al. (2012b) identify how war exposure in childhood and adolescence affects height of adult women in Nigeria. They conclude that the negative impact of armed conflict on child health is greatest for teenagers aged 13 to 16. One explanation for this age-specific result is that adolescents need more food and, thus, are very susceptible to war-related food shortages. Another explanation for this result might be the survival selection meaning that younger children are less likely to survive and are thus not included in the survey. Obviously, only women surviving the war could be included in the survey so it is likely that the true impact of war on adult height is underestimated.

To sum up the literature, conflict negatively impacts child health and child health-related outcomes in later life, regardless of is said exposure took place in utero or after birth. Channels are different, however. It is assumed that low birth weight of children of conflict-affected mothers can be attributed to the stress caused by experiencing conflict. Medical research suggests that maternal stress leads to adverse health outcomes of her baby through changes in the release of the hormone cortisol (Seng et al. 2010). This link is also suggested by Camacho (2008) for the case of Colombia.

In contrast, violent conflict influences babies via different channels. As pointed out by Bundervoet et al. (2009) and Minoiu and Shemyakina (2012), war often leads to displacement of families, economic losses, health impairment and burning of crops. As a consequence, families run short of food, which leads to child malnutrition, which is reflected in the low height-for-age z-scores. Additionally, some papers find that the negative impact for girls is greater than for boys. To the best of my knowledge, there is no study of this type on Colombia. Therefore, it is interesting to know whether results and channels are similar to

those found in African and Asian conflict-affected countries, even though the nature of conflict (duration and changing location over time) and cultural conditions (there is not as strong a preference for boys as in some African and Asian countries) are different.

Last, but not least, it is interesting to know whether there are differences in access to the health care system for children living in conflict or peaceful areas. This topic is neglected in the conflict literature, probably because many conflict-affected Asian and African countries do not have a functional health care system. However, Colombia is equipped with a more or less functional health care system and it is important that it is accessible for conflict-affected children as well.

3. Health and Health Care System of Displaced Children in Colombia

Internally displaced people face a number of additional health issues compared to non-displaced individuals. According to Human Rights Watch (2005), displaced families suffer more frequently from malnutrition, mental health problems and domestic violence. Other health problems include respiratory illnesses, skin infections, tuberculosis, sexually transmitted diseases and a high number of teenage pregnancies. Many of these health concerns can be attributed to the difficult living conditions of displaced people. Often, displaced families live in extreme poverty and cannot afford to buy enough food and are left with poor sanitation and housing facilities. Carillo (2009) notes that many displaced persons cannot afford to regularly eat three meals per day and are not able to feed their families adequately. As a consequence, they suffer from malnutrition, which has a lasting and negative impact, especially on children less than five years old.

Exposure to conflict and violence in their former municipalities and the difficult living circumstances in their new place of residence favor mental illnesses such as sadness, depression, anxiety, despair, regression to childhood and aggressive behavior. Additionally, many households experience domestic violence, substance abuse or divorce. Around 67% of displaced households indicate suffering from psychosocial problems, with 24% of them looking for help, but only 15% actually receiving some form of assistance. This is due to the fact that Colombia lacks psychosocial services for displaced people and because many do not

have health insurance, resulting in the fact that they cannot afford to pay these services (Carrillo 2009).

Officially, every Colombian citizen has access to basic healthcare services. There are three different healthcare systems. The first one is the so-called contributory scheme that is obligatory for formal and independent workers who earn at least twice the minimum wage. The second system is the subsidized scheme that was introduced to provide the poor, who cannot afford to pay for health insurance, with basic health care services. Since there is not enough space for all poor in the subsidized scheme, there is a third scheme for the temporarily unaffiliated – the “*Vinculados*.” In order to become a member of the subsidized scheme, individuals must apply to his or her municipality, which then determines if he or she belongs to the SISBEN level 1, 2 or 3 (which identifies them as poor). Every municipality has a certain number of places for poor individuals. Since resources are not plentiful enough to cover all qualified applicants, prioritizing is necessary. Those who are not able to get a place in the subsidized scheme only have the option of joining the “*Vinculados*” group. After a municipality grants access to an individual he or she has to pick his or her favored health-promoting entity. After having done this, the individual is enrolled and receives a membership card, which is valid for using health care services in that municipality (Cabrera 2011, 212f).

The design of the system clearly presents challenges to displaced individuals, especially those who are members of a subsidized program. Since membership via a subsidized scheme is only valid for a specific municipality, people who move or are forcefully displaced must apply anew in their new municipality if they still want subsidized health insurance. There are problems associated with this procedure. First, during the time between exiting the scheme in the original municipality and that of entering in the new municipality, the individual might lack any insurance. Second, before an individual can apply for health subsidies in their new municipality, the former municipality must release an individual’s health care file, which some municipalities refuse to do (Webster 2012, Part 2). Third, some of the displaced choose not to enter the health care system because in the process their original municipality would learn about their new home, which could, ultimately, put their life at risk. Fourth, if there is no more space in the subsidized scheme, they can only participate in the

“Vinculados” program. In the *“Vinculados”* program, people receive a document indicating their status and entitling them to emergency care. However, they must pay 30% for medical services, which is a significant amount of money for those living in extreme poverty. Moreover, drug costs are not covered under the subsidized scheme, meaning that it is challenging or impossible for displaced families to afford needed medications (Human Rights Watch 2005).

To sum up, exposure to conflict and forced displacement is likely to negatively impact physical and mental health. Unfortunately, the displaced are also the ones least likely to be having health insurance; hence it is more difficult for them to get needed care.

4. Data and Descriptive Statistics

The data used for this analysis come from the Demographic and Health Survey (DHS) 2010. This survey includes information on 204,459 individuals ranging from birth to 96 years of age, living in 258 municipalities. The majority of individual level data collected is on women aged 13-49 and children under 5 years of age. Additionally, the survey asks for detailed information on the households, which is useful for the subsequent analysis. Fortunately, some variables, including health, education, age and ethnicity, are collected for each household member, independent of sex and age.

Another useful feature of the survey concerns the questions on household migration. I not only know whether the household has moved to a different place after 2004 (that is to say after the last DHS survey) but we also know the reason for the movement, including those moving due to paramilitary or guerilla group caused violence. Out of these two variables (migrated after 2004: yes/no; why did you move: paramilitary or guerilla group violence) I construct a displacement variable taking the value one if both questions are answered positively. Unfortunately, we do not know the household’s previous location, which would have given me the possibility to merge DHS data with conflict data. Therefore, I have to rely on the household’s subjective threat of violence in the municipality of origin, which has both advantages and disadvantages. On the one hand, we do not know anything about the intensity of violence in the household’s former municipality because it is not possible to measure intensity with more objective data. On the other hand, we know that the

household felt threatened by illegal armed groups, which is likely to indicate direct exposure to violence, something we are not able to tell when using official data. Although a high rate of violence within a municipality might not affect a specific household if they are far away, there might be cases where one attack is sufficient to cause a household to move to another municipality. For the analysis, I assume that if a household declares that it left the municipality due to violence by illegal armed groups, it was a victim of conflict. In fact, the number of victims from conflict might be underestimated because households were only asked about violence if they had migrated. The predominant reasons for migration were family reasons (34%), working opportunities (28%), seeking better conditions (17%), and violence by paramilitary and guerilla groups (12%). Those who migrated in search of better conditions might also be affected by violence but do not want to admit it. Other migrating households might also have been affected by conflict but it was not the principal reason to leave the municipalities. Overall, this variable appropriately catches the stress a household is facing due to conflict.

For the econometric analysis, I divide the survey into three age groups because the impact of conflict is likely to be different for infants, primary school children and teenagers. The first group comprises babies and children less than 5 years of age, the second group includes primary school children aged 5-12, the third group contains teenagers from 13 to 18.

I use four health variables that take the different pillars of health into account. The first variable is height-for-age z-scores or standard deviations, respectively, to get an impression of the individual's nutritional status. This indicator is widely used in the child health literature, as I noted in the introduction. Z-scores or standard deviations less than -2 indicate moderate and less than -3 severe malnutrition.

The second variable asks parents to rate their child's health on a scale from 1 (excellent) to five (bad). A potential benefit of this variable is that it also tackles aspects of health that cannot be measured directly in a short time during the survey, for example mental health or social and cognitive development. Additionally, it might give us a more comprehensive impression of an individual's health status since it doesn't look at isolated phenomena such as diarrhea, fever or malnutrition. A disadvantage is that the "same" health status might be

rated differently by different individuals for various reasons. Overall, it is a valuable indicator for an individual's overall wellbeing, which is very likely to be negatively affected by conflict and displacement.

The third variable asks whether the child had a health problem last month. It is a more subjective indicator than height-for-age z-scores, where measurements are usually taken by the interviewer, but more objective and restrictive than subjective health because it asks for concrete health problems such as respiratory or gastrointestinal diseases.

The last health indicator regards health insurance membership. I include this variable in order to determine the impact of displacement on the household's health care system access. Families not affiliated to a health insurance either do not have a formal job or were not successful in being admitted to a subsidized health insurance by the municipality. Additionally, displaced families might not even try to get subsidized health insurance out of fear to reveal their new municipality. Furthermore, since membership to a subsidized health insurance is linked to a certain municipality, insurance membership is probably disrupted by displacement.

The independent variables comprise a variety of individual and household characteristics differing slightly across age groups. Individual characteristics for all age groups include age, sex, ethnicity and years of education (except for the youngest age group, where maternal educational attainment is instead included). Additionally, for all children I include a dummy for participating in the Conditional Cash Transfer program, *Familias en Acción*, which is only accessible to poor families living in rural areas. For the youngest age group additional variables for premature birth and birth order are included since they probably affect health outcomes at younger age. To characterize households socioeconomically, I include the number of household members and children less than five years old, as well as dummies for poor, female headed and urban households plus infrastructure and consumption indices. The infrastructure index measures the share of access to electricity, gas, piped water, sewer and garbage collection for a household. The consumption index indicates the household's durable consumer goods (radio, TV, refrigerator, bike, motorcycle, car, landline and mobile telephone). Including these two indices improves the measurement of household socioeconomic status, beyond what is possible with only including a dummy for poverty.

4.1. Descriptive Statistics: Age group 0-4

Table 1: Descriptive Statistics, Children 0-4

	Not Displaced	Displaced	Difference
Height-Age Z-Score	-0.862	-1.129	0.267***
Subjective Health	2.709	2.881	-0.173***
Has Health Insurance	0.830	0.685	0.145***
Had Health Problem			
Premature Birth	0.093	0.119	-0.026
Birth Order	2.405	3.580	-1.174***
Child is Female	0.487	0.505	-0.019
Age in months	29.600	32.959	-3.359***
<i>Familias en Acción</i> Dummy	0.166	0.214	-0.047**
Number of Household Members	5.478	6.410	-0.932 ***
Number of Children under 5	1.616	1.834	-0.217***
Female headed Household	0.270	0.268	0.003
Family is Poor	0.637	0.695	-0.058**
Infrastructure index	0.650	0.675	-0.025
Consumption index	0.467	0.414	0.053***
Mother: Years of Education	4.021	3.590	0.430***
Mother has say on own Health	0.746	0.715	0.031
Mother has say on food	0.610	0.688	-0.078***
Urban	0.629	0.681	-0.053*
Afrocolombian	0.110	0.149	-0.040**
Indigenous	0.135	0.125	0.009
Observations	15679	295	

*** p<0.01, ** p<0.05, * p<0.1

Table 1 compares young children aged 0-4 in displaced and non-displaced households. As shown, almost 300 children in this age cohort left their former municipalities with their families due to paramilitary and guerrilla group violence. Displaced children do worst of all across all included health dimensions: they have lower height-for-age z-scores and their subjective wellbeing is more poorly rated than that of children from non-displaced households. Moreover, affiliation to a health insurance decreases by almost 15%. Hence, by just looking at descriptive statistics, it seems clear that displaced children have worse health outcomes than other children. However, these health differences might not occur just due to displacement, but also because these households differ in other ways such as household composition, ethnicity or educational background; therefore it is important to look at other individual and household characteristics.

We observe in table 1 that displaced children live in poorer, bigger households with more young children than non-displaced households. They are more likely to participate in the *Familias en Acción* program and the household has fewer durable consumer goods, probably

because of poverty or because assets were left behind when the family was displaced. Interestingly, there is no significant difference in infrastructure access.

Displaced households with very young children are also not more likely to be female headed than other households. However, the mother has the final say on the food cooked more frequently which might be a result of changing roles in the household. In displaced households, women often gain additional power because it is easier for them to settle in and to find a job in urban areas (Calderón et al. 2011).

We also note from Table 1 that displaced babies more often live in urban areas and are more likely to be of Afrocolombian origin. Both observations are in accordance with the literature: households threatened by violence often flee from rural areas to cities and Afrocolombians are disproportionately affected by conflict since fighting and coca cultivation often takes place in their areas of residence.

4.2. Descriptive Statistics: Age Group 5-12

Table 2: Descriptive Statistics, Children 5-12

	Not Displaced	Displaced	Difference
HASD	-0.716	-0.892	0.176***
Subjective Health	2.735	2.916	-0.181***
Has Health Insurance	0.900	0.767	0.133***
Had Health Problem	0.094	0.111	-0.017
Child is Female	0.490	0.505	-0.015
Age in years	8.443	8.601	-0.158*
Years of Education	2.129	1.821	0.309***
<i>Familias en Acción</i> Dummy	0.292	0.356	-0.064***
Number of Household Members	5.448	6.164	-0.715***
Number of Children under 5	0.764	0.961	-0.196***
Female headed Household	0.286	0.329	-0.043***
Family is Poor	0.604	0.709	-0.106***
Infrastructure index	0.670	0.667	0.004
Consumption index	0.504	0.436	0.068***
Urban	0.641	0.658	-0.017
Afrocolombian	0.104	0.129	-0.025**
Indigenous	0.122	0.145	-0.023*
Observations	25885	691	

*** p<0.01, ** p<0.05, * p<0.1

There are almost 700 displaced children in this age group. As with younger children, they have lower height-for-age standard deviations, their subjective health status is lower and

they have health insurance less frequently than non-displaced children. However, there is no significant difference in suffering from a health problem last month for displaced and non-displaced children. Already at this age, children from displaced families are lagging behind in school significantly.

As above, households of displaced families are larger, poorer, have a lower consumption index and participate in the CCT program *Familias en Acción* more frequently. Unlike younger children from displaced families, older children live significantly more often in female headed households (33% compared to 27%, the percentage has stayed almost the same for non-displaced households). This might be a consequence of changing role models, which the former male head of the household may not agree to in the longer term.

4.3. Descriptive Statistics: Age Group 13-18

Table 3: Descriptive Statistics, Children 13-18

	Not Displaced	Displaced	Difference
HASD	-0.464	-0.713	0.249***
Subjective Health	2.801	2.976	-0.175***
Has Health Insurance	0.895	0.747	0.148***
Had Health Problem	0.078	0.074	0.004
Child is Female	0.507	0.489	0.017
Age in years	15.330	15.136	0.194**
Years of Education	7.564	6.432	1.132***
<i>Familias en Acción</i> Dummy	0.194	0.274	-0.080***
Number of Household Members	5.424	6.160	-0.736***
Number of Children under 5	0.498	0.657	-0.159***
Female headed Household	0.319	0.423	-0.104***
Family is Poor	0.553	0.691	-0.138***
Infrastructure index	0.704	0.672	0.032**
Consumption index	0.528	0.433	0.095***
Urban	0.683	0.697	-0.014
Afrocolombian	0.099	0.122	-0.023
Indigenous	0.103	0.197	-0.093***
Observations	16200	376	

*** p<0.01, ** p<0.05, * p<0.1

As for younger children, we observe poorer health outcomes for displaced teenagers compared to non-displaced ones. Moreover, displaced teenagers have more than one year less education than their non-displaced counterparts. Differences in household characteristics are the same as in families with small children. Additionally, the number of

female headed households (42%) increases dramatically compared to non-displaced households (32%) and to displaced households with younger children (33%).

In a nutshell, we observe for all age groups that displaced households differ in various ways from non-displaced households: in general, they are poorer, bigger, have more children less than five years old, are more likely female headed, and disproportionally more often from ethnic minorities. Displaced household members achieve less education and are more likely to participate in the CCT program, *Familias en Acción*. Regarding health outcomes, they are more susceptible to malnutrition (measured as height-for-age standard deviation), report worse subjective health, and more likely to have had a health problem in the last month. Additionally, significantly fewer of them have health insurance.

5. Empirical Strategy

The empirical strategy relies on a comparison of the differing health outcomes of displaced and non-displaced children of similar age. The idea behind this approach is that differences in health outcomes for otherwise similar individuals only arise due to displacement. In this scenario, displacement is the treatment and displaced children belong to the treatment group, while non-displaced children constitute the control group. I would like to know the impact of treatment, i.e. displacement, on certain health outcomes. In a perfect world, one would know the individual's health outcomes with and without displacement in order to determine the impact of treatment. In the real world, however, this is not possible since one can only observe one status – displaced or not displaced – per individual at the same time.

One way to overcome this problem is to use a control group, that is to say individuals who did not get the treatment, in this case meaning that they were not displaced. The first thought might be to simply take differences between outcomes of treated and untreated individuals and consider this difference as treatment impact. In most cases, however, this procedure does not reveal the true impact of treatment because groups not only differ regarding their treatment status but also for a variety of other characteristics that might influence outcomes of interest or participation in treatment directly or indirectly as well. When looking at the descriptive statistics in the previous section of this paper, I noticed that there are not only differences in health outcomes of displaced and non-displaced children

but that displaced and non-displaced children are also different in multiple other aspects, like years of education, family size, socioeconomic status and ethnicity. Ignoring these factors would result in selection bias. Selection bias means that treated and untreated individuals have different outcomes even without treatment. This bias can be caused by observable or unobservable characteristics (Caliendo and Hujer 2006). It is very unlikely that sorting into displacement is random in Colombian municipalities. Hence I must find another way to compare the health outcomes of displaced and non-displaced children.

The first approach is to use a linear regression model of the form

$$\Delta \text{Reg}_{\text{ATT}} = E(Y_1 - Y_0 | X, D=1) = X(\beta_1 - \beta_0) + E(U_1 - U_0 | X, D=1) \quad (1)$$

Where Y_1 is the outcome with treatment, Y_0 is the outcome for the control group, X represents a set of covariates, U_1 and U_0 are the usual error terms and D is a binary variable taking the value one for treated individuals. This equation states that treatment effects are calculated as the difference in outcomes after controlling for as many outcome-influencing regressors as possible.

In this paper, Y represents the four health outcomes: (i) height-for-age standard deviation (or z-score for the youngest group); (ii) subjective health; (iii) health problem last month; and (iv) health insurance membership. Height-for-age standard deviation is a metric variable, subjective health is measured on an ordinal scale with 5 categories while the outcomes health problem last month and health insurance membership are dichotomous variables.

Independent variables include individual and household characteristics as well as dummies for year of the interview, ethnicity, urban location, region, municipality and department. The set of individual covariates consists of age, gender, years of education, participation in *Familias en Acción*, child is twin or born premature and birth order. Independent variables on the household level comprise number of household members, number of children under 5, female headed household, household lives in poverty, access to infrastructure and number of durable consumer goods. Three out of the six specifications are clustered on the household level.

Since the linear regression model has the serious drawback that it does not necessarily compare only similar treatment and control groups, propensity score matching is used as a second approach to estimate the impact of displacement on child health. Linear regression models display estimates even without an appropriate control group because the linear functional form assumption replaces missing data whereas propensity score matching ensures the similarity of treatment and control group due to the common support assumption (Caliendo and Hujer 2006).

The technique of propensity score matching was first discussed by Rosenbaum and Rubin (1983). The idea of this method is to find for each individual from the treatment group a perfect match in the control group when randomization across groups is not possible. Perfect match means that these two individuals possess the same characteristics except for the fact that one of them was treated, which in this case is to be displaced. Then it is possible to calculate the treatment effect simply by subtracting the outcomes of treated and untreated individuals. Often, however, there are so many characteristics that need to be similar in order to find a suitable match that no counterfactual can be found for each treated individual in reality. In order to increase the likelihood of finding adequate counterfactuals for the treatment group, so-called propensity score matching is implemented. This technique finds counterfactuals for treated individuals by relying on propensity scoring. This score reflects the probability of belonging to the treatment group based on observable characteristics X , which are likely to influence treatment participation. After having calculated propensity scores for all observations, the outcomes of individuals with similar propensity scores are compared. The treatment effect is then computed as the difference in outcomes across treatment and control group. Treated individuals for whom no counterfactual with similar propensity score can be found are dropped from the analysis (Khandker et al. 2010).

There are various methods to calculate propensity scores; I highlight the three that I use for the analysis. The first, and probably most intuitive, is nearest-neighbor matching, which matches the counterfactual with the most similar propensity score to the treated observation. The disadvantage of this matching method is that sometimes the closest neighbor is far away and therefore chosen control units are bad matches for treated units.

The second matching technique is stratification matching. Here, the region of common support is divided into different strata and the treatment effect is calculated within each stratum as difference between treatment and control observations. In the end, an overall treatment effect is computed by calculating a weighted average of these stratum treatment effects. The share of observations per stratum is the respective weight. The last method used in this paper is kernel matching. Compared to the other matching techniques it has the advantage that it uses all observations within the common support. Kernel matching uses a weighted sum of all control group members, with the greatest weight given to observations with similar propensity scores as the treated person.

There are two main disadvantages of using propensity score matching. First, if there are unobserved factors that influence the selection into treatment or control group, the propensity score will be biased. Consequently, the computed treatment effect based on biased propensity scores does not correspond to the true treatment effect. Second, if observed characteristics from treatment and control group differ too much from each other, the region of common support might be rather small because many observations from the treatment or control group are dropped. This situation could lead to a sampling bias in the treatment effect. Therefore, I use two different methods to estimate the effect of displacement on health outcomes.

6. Results

6.1. Linear Regression Model

6.1.1. Age group 0 – 4

Table 4 (in the appendix) shows estimation results for height-for-age z-scores using OLS regressions. We see that displacement negatively impacts nutritional status significantly, at the 1% level, for small children and that the size of this impact is similar across all specifications. This finding is in line with research undertaken in African and Asian countries, which also find a negative impact of conflict on nutritional status. Malnutrition could occur after displacement due to the limited availability of food in the new location or due to lower quality food. It could also be that malnutrition existed before displacement due to conflict and that scarcity of food was one reason to leave the municipality.

Control variables show that premature birth, being a twin, having a higher birth order number (that is to say being among the younger children in a family) and coming from a big and/or poor family leads to lower z-scores, as expected. Interestingly, being a female child is associated with a higher z-score, a result also found by Guerrero-Serdán (2009). She explains this finding with the assumption that baby girls are more robust than baby boys.

We see the impact of displacement on subjective health in table 5 in the appendix of this paper (please note that higher values correspond to poorer health outcomes). Displaced children are rated with a poorer health status by their parents. This means that conflict actually leads to worse health outcomes or that displaced parents perceive their child's health to be worse than do non-displaced parents. As with height-for-age z-scores, children who live in bigger, poorer or female headed households are associated with worse health status. Findings are robust across the different specifications and coefficients sizes also do not change.

We note in table 6 (in the appendix) that displacement decreases affiliation to a health insurance by almost 15%. This finding is significant for all specifications on the 1% level. It is very likely that – if they previously had insurance - displaced households lose their affiliation to the health insurance in the course of displacement because they are changing their location and thus the connection to the health insurance is interrupted. What we observe from table 6 is that participating in the *Familias en Acción* program has a positive impact on having health insurance probably because by participating in this program they are officially registered as poor. The children of large and female headed households are significantly less likely to have health insurance membership.

In contrast to other health outcomes for this age group, displacement does not affect the incidence of health problems during the last month, as displayed in table 7 (in the appendix). Young children from bigger families suffer significantly less often from health problems. One reason could be that in big families less attention is given to each child and therefore health problems are not detected as frequently as in smaller families. Alternatively, perhaps, the parents are better able to tell what health problems are severe and worth telling to the interviewers because they've had more experience.

6.1.2. Age group 5-12

We observe in table 8 (in the appendix) that, unlike younger children, displacement has no significant impact on height-for-age standard deviation of primary school children. One explanation could be that this age group is not so vulnerable to malnutrition, as opposed to younger children. As before, being female positively impacts nutritional status, while coming from a poor, large household increases the likelihood for malnutrition.

Being displaced has a negative and significant impact on overall health, as seen in table 9 (in the appendix). Children from big, female headed and poor households suffer more from poor health conditions. An interesting finding is that living with younger children has a positive impact on children aged 5-12. One explanation could be that compared to younger children, who are ill more often due to their developing immune system, parents consider older children to be healthier.

Table 10 (in the appendix) indicates that displacement decreases the likelihood for children aged 5-12 to be affiliated to a health insurance by approximately 12%. This is slightly less compared to younger children but still a relatively large number. As for the first group, participating in *Familias en Acción* positively influences health insurance enrollment.

We note in table 11 (in the appendix) that significantly more children from displaced families suffered from a health problem last month. This could be a consequence of the difficult living situations that displaced households face; that is to say poor quality housing, limited access to health services and medication, low quality or limited food, or environmental disadvantages like pollution.

6.1.3. Age Group 13-18

We observe in table 12 (in the appendix) that displacement does not significantly affect height-for-age standard deviations. This is the same result that we found for primary school children. As opposed to younger children, female teenagers are significantly more vulnerable to malnutrition. One explanation for this result might be that male teenagers demand more food because they are growing rapidly during this period of life. As a consequence, there might be less food available for female teenagers. On the other hand, young women might

try to eat less in order to meet expectations of an ideal body. As with previous results, coming from a big, poor family influences nutritional status negatively.

Being a displaced teenager affects subjective health in a negative manner, as reported in table 13 (in the appendix). This is a similar finding to that for younger children and babies. Female teenagers and youth from female headed and poor households also report a poorer subjective health status.

Table 14 (in the appendix) shows that, as for younger children, being displaced reduces health insurance membership of teenagers by 14%. Participating in *Familias en Acción* has a significant and positive impact on being affiliated to a health insurance. This might be due to the fact that these teenagers are officially registered for SISBEN 1 or 2, which is a precondition for applying for the subsidized health care system.

Displacement does not significantly increase the risk of suffering from a health problem for teenagers as shown in table 15 (in the appendix). Hence, the negative impact of displacement on subjective health might not be due to obvious health problems but more a feeling of diffuse indisposition.

6.2. Propensity Score Matching

6.2.1. Age group 0-4

Table 16 shows health outcomes using the different propensity score matching techniques, comparing them to OLS results. We see that displacement has a negative and significant impact on height-for-age standard deviation for all specifications except nearest neighbor matching. The coefficients of kernel and stratification matching are slightly larger than OLS estimates. Hence we can say that this negative impact is robust across different estimation techniques.

In the second part of this table we see that displacement increases the likelihood of suffering from poor subjective health for all estimations, with the only exception being, as before, nearest neighbor matching. As with height-for-age z-scores, coefficients are smaller for OLS

estimates than for propensity score matching. Overall, we find robust support for the negative impact of displacement on subjective child health.

The third part of table 16 summarizes the estimated effect of displacement on being affiliated to a health insurance. The average treatment effects indicates that displaced children have a lower probability of being member of a health insurance compared to the control group, irrespective of the type of matching technique used. In this case, estimates of propensity score matching and OLS estimates are of similar size, which is a sign for a robust estimation result.

We observe in the last part of table 16 that displacement does not significantly increase the likelihood of having health problems, a result we also found using linear regression models. Therefore, we suggest that the aforementioned bad subjective health for displaced children does not necessarily imply that they suffer from more or severe diseases but that it might rather be a mix of malnutrition and psychosocial problems.

6.2.2. Age group 5-12

Table 17 provides results of the impact of displacement on health outcomes for primary school children. Unlike for the younger age cohort, significance of estimates is not consistent across propensity score matching and OLS regression for height-for-age standard deviation and having a health problem. We observe in the first section of table 17 that, according to propensity score matching, displacement affects nutritional status of children aged 5-12 negatively, irrespective of the matching technique used. However, OLS regression estimates do not provide a significant result. This difference could come from the fact that in propensity score matching just similar individuals are compared whereas with OLS this must not be the case. In the case of having a health problem last month it is the other way round, namely that propensity scores estimates do not show any significant effect of displacement whereas OLS estimates suggests a negative influence of displacement on illnesses.

For the remaining two health outcomes I find significant and robust results across all specifications; results similar in size to that one of the younger age cohort. Part 2 of table 17 suggests that parents of primary children who have been displaced in the past 5 years indicate a lower subjective health status for their children. I find the approximately the same

size of this effect for propensity score matching and OLS regression models thus indicating a robust finding. The third section of table 18 provides evidence for a significantly lower coverage of health insurance among displaced primary school children compared to non-displaced children. Estimates from propensity score matching are about the same size independent of the matching technique used. Additionally, their magnitude is similar to OLS estimates and to estimates for children aged 0-4.

6.2.3. Age group 13-18

Table 18 suggests that, when compared to younger children, displacement does not have as strong a negative impact on teenager's health outcomes. With the exception of kernel matching (for height-for-age standard deviation), there is no significant impact of displacement on nutritional status and the likelihood of suffering from a health problem. One explanation for this finding might be that their health is more robust (partly because due to immunization caused by illnesses in early childhood) and that for this reason they are less prone to diseases.

The second part of table 18 displays estimates of displacement on subjective health. The size of these estimates is significantly smaller than estimates for younger children and is only significant at the 5% or 10% level (with the exception of kernel estimates which are significant on the 1% level). This evidence suggests that displacement is less of a problem for subjective health status.

Regarding health insurance membership, we find the same picture as for younger children, namely that being displaced reduces the likelihood of being affiliated to a health insurance due to the issues discussed in section 3. The magnitude of the coefficients is consistent across matching techniques and displays similar estimates not only for OLS regressions but also compared to children aged 0-12. Hence, not being affiliated to a health insurance and, thus, having only limited access to the health care system poses a big problem for displaced families and their children – regardless of age.

7. Conclusion

This paper investigates the causal impact of displacement on health outcomes for Colombian children of different age cohorts. It uses the Colombian Demographic and Health Survey

2010, which provides both a number of health outcomes and information about displacement. Additionally, it includes many characteristics on children and their respective households. A novelty of this paper compared to other research on this topic is that it employs two different empirical strategies to identify the impact of displacement on child health. The first approach applies a linear regression model and includes displacement status as a binary independent variable, along with many individual and household characteristics. In order to capture different dimensions of health, four health outcomes are used as dependent variables: (i) height-for-age standard deviation or z-scores; (ii) subjective health status; (iii) affiliation to a health insurance; and (iv) having a health problem last month. The validity of results is tested using six varying specifications – differences concern clustering on the household level and including dummies on regions, department or municipalities.

However, two problems could arise using only this method. First, displacement is probably not random across children as some are more likely to be displaced than others. Not taking this issue into account could result in a selection bias. Second, displaced and non-displaced children might be different in some characteristics, meaning that differences in health outcomes are not just because of displacement but also due to other factors. In order to overcome this problem, propensity score matching is employed as a second empirical strategy. To get robust findings, three matching techniques are used: (i) nearest neighbor matching; (ii) stratification matching; and (iii) kernel matching.

Overall, a negative relationship between displacement and child health is documented, with some differences between age cohorts. In line with findings from African and Asian countries, armed conflict – measured as displacement in this case – increases the likelihood of malnutrition for young children. Additionally, this study also finds a negative relationship between nutritional status and displacement for primary school children. The nutritional status of teenagers is not significantly influenced by displacement. The main reason for these results is probably the insufficient supply of high quality food due to displacement, which has a much stronger effect on younger children.

Being displaced leads to a lower subjective health status for children from all age cohorts. Together with the finding that displacement does not increase the likelihood of suffering

from health problems significantly (except for children aged 5-12 in case of OLS estimates), this implies that bad subjective health is not linked to acute diseases but takes into account aspects beyond physical health. Therefore, it could be assumed that displaced parents rate their child's health worse compared to a non-displaced parent due to malnutrition or psychosocial problems caused by displacement. Since this finding is robust across age groups and specifications, more attention should be given to improve the overall health status of displaced children. Measures could include psychological support for parents and children as well as improving food supplies in order to avoid malnutrition.

As previously noted, displaced children are not affected by health problems significantly more often than non-displaced children. This is a surprising finding since one would expect that displacement leads to an increase in infectious diseases like diarrhea and acute respiratory illnesses due to poor housing and sanitation facilities. It might be that the true impact of displacement on diseases is underestimated. First, the survey only asks about health problems in the last month and, therefore, older illnesses are not accounted for. Second, chronic illnesses might be "forgotten" by the respective household member because the chronic illness already represents normality and is therefore not mentioned by the respondent.

Last, but not least, displaced children from all age cohort are significantly less likely to have health insurance. This finding is understandable when looking at the complex process of obtaining access to subsidized health insurance in Colombia. Since a subsidized health insurance is linked to specific municipalities, affiliation is disrupted by displacement. In their new municipality, displaced people must apply anew with their new municipality in order to obtain insurance. Two problems arise frequently. First, access to the subsidized health care is limited, as municipalities do not have enough resources for its poor inhabitants. Second, in order to obtain access to the subsidized insurance in a new municipality, it is necessary to disclose the municipality of origin. Displaced people often do not want to reveal their former municipality out of fear of threats by paramilitaries or guerrilla groups. Consequently, they choose to forgo health insurance. In order to improve the access to health care for displaced families, the process of becoming a member of a health insurance should be simplified and more places should be made available for displaced persons.

A next step in research would be to analyze the consequences of being uninsured for displaced families. It could be that due to lacking access to the health care system, displaced people use health care services or pre-, ante- and postnatal care less often. In the long-term, this situation is likely to lead to deteriorating health outcomes for uninsured, displaced families. Therefore, it would be useful to compare the use of health care services of displaced and non-displaced families in order to take adequate measures to provide displaced families with basic health care services they can afford.

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Appendix

Table 4: OLS Results, Children 0-4. Dependent Variable: Height-for-Age Z-Score

	[1]	[2]	[3]	[4]	[5]	[6]
Displaced	-0.129** [0.065]	-0.145** [0.065]	-0.136** [0.066]	-0.129** [0.062]	-0.145** [0.061]	-0.136** [0.062]
Premature Birth	-0.272*** [0.033]	-0.262*** [0.033]	-0.248*** [0.033]	-0.272*** [0.032]	-0.262*** [0.032]	-0.248*** [0.032]
Birth Order	-0.035*** [0.006]	-0.037*** [0.006]	-0.039*** [0.006]	-0.035*** [0.006]	-0.037*** [0.006]	-0.039*** [0.006]
Child is Twin	-0.290*** [0.100]	-0.280*** [0.098]	-0.294*** [0.096]	-0.290*** [0.078]	-0.280*** [0.077]	-0.294*** [0.076]
Child is Female	0.048*** [0.017]	0.045*** [0.017]	0.045*** [0.017]	0.048*** [0.017]	0.045*** [0.017]	0.045*** [0.017]
Age in months	-0.006*** [0.001]	-0.006*** [0.001]	-0.006*** [0.001]	-0.006*** [0.001]	-0.006*** [0.001]	-0.006*** [0.001]
<i>Familias en Acción</i> Dummy	-0.084*** [0.024]	-0.096*** [0.024]	-0.098*** [0.025]	-0.084*** [0.023]	-0.096*** [0.024]	-0.098*** [0.024]
No. Of Household Members	-0.017*** [0.005]	-0.013** [0.005]	-0.015*** [0.005]	-0.017*** [0.005]	-0.013*** [0.005]	-0.015*** [0.005]
No. Of Children under 5	-0.120*** [0.015]	-0.122*** [0.015]	-0.121*** [0.015]	-0.120*** [0.013]	-0.122*** [0.013]	-0.121*** [0.013]
Female Headed HH	0.0206 [0.021]	0.028 [0.021]	0.030 [0.021]	0.021 [0.020]	0.028 [0.020]	0.030 [0.020]
Poor Household	-0.120*** [0.028]	-0.138*** [0.028]	-0.140*** [0.029]	-0.120*** [0.026]	-0.138*** [0.026]	-0.140*** [0.028]
Access to Infrastructure	0.068 [0.053]	0.103* [0.054]	0.148** [0.059]	0.068 [0.049]	0.103** [0.051]	0.148*** [0.056]
Access to Durable Goods	0.829*** [0.053]	0.788*** [0.054]	0.803*** [0.055]	0.829*** [0.050]	0.788*** [0.051]	0.803*** [0.052]
Mother: Years of Education	0.028*** [0.005]	0.028*** [0.005]	0.028*** [0.005]	0.028*** [0.005]	0.028*** [0.005]	0.028*** [0.005]
Mother: Say on own Health	0.083*** [0.022]	0.074*** [0.022]	0.080*** [0.022]	0.083*** [0.021]	0.074*** [0.021]	0.080*** [0.021]
Mother: Say on Food	0.014 [0.021]	0.017 [0.020]	0.019 [0.021]	0.014 [0.020]	0.017 [0.020]	0.019 [0.020]
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Ethnicity Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Urban Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Municipality Dummy	No	No	Yes	No	No	Yes
Department Dummy	No	Yes	No	No	Yes	No
Region Dummy	Yes	No	No	Yes	No	No
Clustered on HH Level	Yes	Yes	Yes	No	No	No
Observations	15496	15496	15496	15496	15496	15496
R-Squared	0.141	0.159	0.181	0.141	0.159	0.181

*** p<0.01, ** p<0.05, * p<0.1

Table 5: OLS Results, Children 0-4. Dependent Variable: Subjective Health

	[1]	[2]	[3]	[4]	[5]	[6]
Displaced	0.139** [0.056]	0.111** [0.055]	0.111** [0.056]	0.139*** [0.051]	0.111** [0.051]	0.111** [0.052]
Premature Birth	0.059** [0.027]	0.062** [0.026]	0.054** [0.026]	0.059** [0.026]	0.062** [0.025]	0.054** [0.025]
Birth Order	0.008 [0.005]	0.008 [0.005]	0.007 [0.005]	0.008 [0.005]	0.007 [0.005]	0.007 [0.005]
Child is Twin	-0.138* [0.077]	-0.143* [0.076]	-0.123 [0.077]	-0.138** [0.059]	-0.143** [0.059]	-0.123** [0.060]
Child is Female	-0.008 [0.014]	-0.006 [0.014]	-0.011 [0.014]	-0.008 [0.014]	-0.007 [0.014]	-0.011 [0.014]
Age in months	0.003*** [0.000]	0.003*** [0.000]	0.003*** [0.000]	0.003*** [0.000]	0.003*** [0.000]	0.003*** [0.000]
<i>Familias en Acción</i> Dummy	0.030 [0.020]	0.021 [0.020]	0.024 [0.021]	0.030 [0.020]	0.021 [0.020]	0.024 [0.020]
No. Of Household Members	0.017*** [0.004]	0.021*** [0.004]	0.020*** [0.004]	0.017*** [0.004]	0.021*** [0.004]	0.020*** [0.004]
No. Of Children under 5	0.036*** [0.013]	0.040*** [0.012]	0.039*** [0.013]	0.036*** [0.011]	0.040*** [0.010]	0.039*** [0.011]
Female Headed HH	0.080*** [0.018]	0.079*** [0.017]	0.077*** [0.017]	0.080*** [0.016]	0.079*** [0.016]	0.077*** [0.016]
Poor Household	0.093*** [0.023]	0.075*** [0.023]	0.056** [0.025]	0.093*** [0.021]	0.075*** [0.022]	0.056** [0.023]
Access to Infrastructure	-0.104** [0.044]	-0.057 [0.045]	-0.077 [0.050]	-0.104*** [0.040]	-0.057 [0.041]	-0.077* [0.045]
Access to Durable Goods	-0.493*** [0.045]	-0.500*** [0.045]	-0.477*** [0.046]	-0.493*** [0.041]	-0.498*** [0.042]	-0.477*** [0.043]
Mother: Years of Education	-0.003 [0.004]	-0.002 [0.004]	-0.002 [0.004]	-0.003 [0.004]	-0.002 [0.004]	-0.002 [0.004]
Mother: Say on own Health	-0.018 [0.019]	-0.016 [0.019]	-0.016 [0.019]	-0.018 [0.017]	-0.016 [0.017]	-0.016 [0.017]
Mother: Say on Food	-0.029* [0.017]	-0.024 [0.017]	-0.024 [0.017]	-0.029* [0.016]	-0.024 [0.016]	-0.024 [0.016]
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Ethnicity Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Urban Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Municipality Dummy	No	No	Yes	No	No	Yes
Department Dummy	No	Yes	No	No	Yes	No
Region Dummy	Yes	No	No	Yes	No	No
Clustered on HH Level	Yes	Yes	Yes	No	No	No
Observations	16425	16425	16425	16425	16425	16425
R-Squared	0.052	0.072	0.093	0.052	0.072	0.093

*** p<0.01, ** p<0.05, * p<0.1

Table 6: OLS Results, Children 0-4. Dependent Variable: Has Health Insurance

	[1]	[2]	[3]	[4]	[5]	[6]
Displaced	-0.154*** [0.032]	-0.145*** [0.031]	-0.158*** [0.031]	-0.154*** [0.027]	-0.145*** [0.027]	-0.158*** [0.027]
Premature Birth	0.002 [0.010]	-0.003 [0.010]	-0.004 [0.010]	0.002 [0.010]	-0.003 [0.009]	-0.004 [0.009]
Birth Order	-0.005* [0.002]	-0.004* [0.002]	-0.003 [0.002]	-0.005** [0.002]	-0.004* [0.002]	-0.003 [0.002]
Child is Twin	0.008 [0.034]	0.008 [0.034]	0.012 [0.033]	0.008 [0.025]	0.008 [0.025]	0.012 [0.024]
Child is Female	0.006 [0.006]	0.006 [0.006]	0.006 [0.005]	0.006 [0.006]	0.006 [0.006]	0.006 [0.005]
Age in months	0.003*** [0.000]	0.003*** [0.000]	0.003*** [0.000]	0.003*** [0.000]	0.003*** [0.000]	0.003*** [0.000]
<i>Familias en Acción</i> Dummy	0.083*** [0.007]	0.092*** [0.007]	0.090*** [0.006]	0.083*** [0.007]	0.092*** [0.007]	0.090*** [0.007]
No. Of Household Members	-0.005*** [0.002]	-0.005*** [0.002]	-0.005*** [0.002]	-0.005*** [0.002]	-0.005*** [0.002]	-0.005*** [0.002]
No. Of Children under 5	-0.023*** [0.006]	-0.022*** [0.006]	-0.017*** [0.006]	-0.023*** [0.005]	-0.022*** [0.005]	-0.017*** [0.005]
Female Headed HH	-0.017** [0.007]	-0.018** [0.007]	-0.020*** [0.007]	-0.017** [0.007]	-0.018*** [0.006]	-0.020*** [0.006]
Poor Household	-0.001 [0.010]	-0.005 [0.010]	-0.012 [0.010]	-0.001 [0.009]	-0.005 [0.009]	-0.012 [0.009]
Access to Infrastructure	0.054*** [0.019]	0.084*** [0.020]	0.055*** [0.021]	0.054*** [0.017]	0.084*** [0.017]	0.055*** [0.019]
Access to Durable Goods	0.203*** [0.019]	0.203*** [0.019]	0.204*** [0.019]	0.203*** [0.017]	0.203*** [0.017]	0.204*** [0.017]
Mother: Years of Education	0.005*** [0.002]	0.005*** [0.002]	0.005*** [0.002]	0.005*** [0.002]	0.005*** [0.002]	0.005*** [0.006]
Mother: Say on own Health	0.011 [0.008]	0.009 [0.008]	0.010 [0.008]	0.011 [0.007]	0.009 [0.007]	0.010 [0.007]
Mother: Say on Food	0.012* [0.007]	0.018*** [0.007]	0.018*** [0.007]	0.012* [0.006]	0.018*** [0.006]	0.018*** [0.006]
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Ethnicity Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Urban Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Municipality Dummy	No	No	Yes	No	No	Yes
Department Dummy	No	Yes	No	No	Yes	No
Region Dummy	Yes	No	No	Yes	No	No
Clustered on HH Level	Yes	Yes	Yes	No	No	No
Observations	16388	16388	16388	16388	16388	16388
R-Squared	0.089	0.109	0.15	0.089	0.109	0.15

*** p<0.01, ** p<0.05, * p<0.1

Table 7: OLS Results, Children 0-4. Dependent Variable: Had Health Problem

	[1]	[2]	[3]	[4]	[5]	[6]
Displaced	0.009 [0.023]	0.016 [0.023]	0.017 [0.023]	0.009 [0.021]	0.016 [0.021]	0.017 [0.021]
Premature Birth	0.006 [0.010]	0.003 [0.010]	0.004 [0.010]	0.006 [0.010]	0.003 [0.010]	0.004 [0.010]
Birth Order	-0.003 [0.002]	-0.003 [0.002]	-0.003 [0.002]	-0.003* [0.002]	-0.003* [0.002]	-0.003 [0.002]
Child is Twin	0.027 [0.034]	0.030 [0.033]	0.027 [0.034]	0.027 [0.027]	0.030 [0.026]	0.027 [0.027]
Child is Female	-0.012** [0.006]	-0.011* [0.006]	-0.010* [0.006]	-0.012** [0.006]	-0.011* [0.006]	-0.010* [0.006]
Age in months	-0.000** [0.000]	-0.000 [0.000]	-0.000 [0.000]	-0.000** [0.000]	-0.000 [0.000]	-0.000 [0.000]
<i>Familias en Acción</i> Dummy	0.010 [0.008]	0.001 [0.008]	0.001 [0.009]	0.010 [0.008]	0.001 [0.008]	0.001 [0.008]
No. Of Household Members	-0.010*** [0.002]	-0.011*** [0.002]	-0.010*** [0.002]	-0.010*** [0.001]	-0.011*** [0.001]	-0.010*** [0.001]
No. Of Children under 5	0.005 [0.005]	0.003 [0.005]	0.005 [0.005]	0.005 [0.004]	0.003 [0.004]	0.005 [0.004]
Female Headed HH	0.005 [0.007]	0.009 [0.007]	0.008 [0.007]	0.005 [0.007]	0.009 [0.007]	0.008 [0.007]
Poor Household	-0.006 [0.010]	-0.002 [0.010]	0.002 [0.010]	-0.006 [0.009]	-0.002 [0.009]	0.002 [0.010]
Access to Infrastructure	0.005 [0.017]	-0.008 [0.017]	-0.010 [0.019]	0.005 [0.016]	-0.008 [0.016]	-0.010 [0.018]
Access to Durable Goods	0.013 [0.018]	0.029 [0.018]	0.014 [0.018]	0.013 [0.017]	0.029* [0.017]	0.014 [0.017]
Mother: Years of Education	0.002 [0.002]	0.001 [0.002]	0.001 [0.002]	0.002 [0.002]	0.001 [0.002]	0.001 [0.002]
Mother: Say on own Health	0.028*** [0.007]	0.027*** [0.007]	0.026*** [0.007]	0.028*** [0.007]	0.027*** [0.007]	0.026*** [0.007]
Mother: Say on Food	0.021*** [0.007]	0.020*** [0.007]	0.020*** [0.007]	0.021*** [0.006]	0.020*** [0.006]	0.020*** [0.006]
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Ethnicity Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Urban Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Municipality Dummy	No	No	Yes	No	No	Yes
Department Dummy	No	Yes	No	No	Yes	No
Region Dummy	Yes	No	No	Yes	No	No
Clustered on HH Level	Yes	Yes	Yes	No	No	No
Observations	16425	16425	16425	16425	16425	16425
R-Squared	0.015	0.033	0.054	0.015	0.033	0.054

*** p<0.01, ** p<0.05, * p<0.1

Table 8: OLS Results, Children 5-12. Dependent Variable: Height-for-Age Standard Deviation

	[1]	[2]	[3]	[4]	[5]	[6]
Displaced	0.004 [0.044]	0.002 [0.044]	-0.015 [0.044]	0.004 [0.037]	0.002 [0.037]	-0.015 [0.037]
Age in years	-0.156*** [0.006]	-0.155*** [0.006]	-0.156*** [0.006]	-0.156*** [0.006]	-0.155*** [0.006]	-0.156*** [0.006]
Child is Female	0.082*** [0.012]	0.083*** [0.012]	0.084*** [0.012]	0.082*** [0.012]	0.083*** [0.012]	0.084*** [0.012]
Years of Education	0.099*** [0.007]	0.098*** [0.008]	0.100*** [0.008]	0.099*** [0.007]	0.098*** [0.007]	0.100*** [0.007]
<i>Familias en Acción</i> Dummy	-0.127*** [0.016]	-0.119*** [0.016]	-0.103*** [0.017]	-0.127*** [0.014]	-0.119*** [0.014]	-0.103*** [0.015]
No. Of Household Members	-0.049*** [0.004]	-0.048*** [0.004]	-0.048*** [0.004]	-0.049*** [0.003]	-0.048*** [0.003]	-0.048*** [0.003]
No. Of Children under 5	-0.043*** [0.010]	-0.045*** [0.010]	-0.044*** [0.010]	-0.043*** [0.008]	-0.045*** [0.008]	-0.044*** [0.008]
Female Headed HH	0.010 [0.016]	0.006 [0.016]	0.005 [0.016]	0.010 [0.014]	0.006 [0.014]	0.005 [0.014]
Poor Household	-0.145*** [0.021]	-0.158*** [0.022]	-0.156*** [0.023]	-0.145*** [0.019]	-0.158*** [0.019]	-0.156*** [0.020]
Access to Infrastructure	0.087** [0.041]	0.149*** [0.042]	0.196*** [0.047]	0.089*** [0.034]	0.149*** [0.035]	0.196*** [0.040]
Access to Durable Goods	0.824*** [0.043]	0.780*** [0.043]	0.763*** [0.044]	0.824*** [0.037]	0.780*** [0.037]	0.763*** [0.038]
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Ethnicity Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Urban Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Municipality Dummy	No	No	Yes	No	No	Yes
Department Dummy	No	Yes	No	No	Yes	No
Region Dummy	Yes	No	No	Yes	No	No
Clustered on HH Level	Yes	Yes	Yes	No	No	No
Constant	-220.3*** [58.73]	-212,9 [150.8]	413,7 [741.2]	-220.3*** [50.52]	-212.9* [123.0]	413,7 [690.1]
Observations	25022	25022	25022	25022	25022	25022
R-Squared	0.204	0.211	0.232	0.204	0.211	0.232

*** p<0.01, ** p<0.05, * p<0.1

Table 9: OLS Results, Children 5-12. Dependent Variable: Subjective Health

	[1]	[2]	[3]	[4]	[5]	[6]
Displaced	0.118*** [0.040]	0.090** [0.040]	0.103*** [0.039]	0.118*** [0.033]	0.090*** [0.033]	0.103*** [0.033]
Age in years	0.034*** [0.005]	0.036*** [0.005]	0.037*** [0.005]	0.034*** [0.005]	0.036*** [0.005]	0.037*** [0.005]
Child is Female	-0.004 [0.011]	-0.002 [0.011]	-0.002 [0.011]	-0.004 [0.011]	-0.002 [0.011]	-0.002 [0.011]
Years of Education	-0.039*** [0.006]	-0.043*** [0.006]	-0.043*** [0.006]	-0.039*** [0.006]	-0.043*** [0.006]	-0.043*** [0.006]
<i>Familias en Acción</i> Dummy	0.045*** [0.014]	0.017 [0.014]	0.016 [0.015]	0.045*** [0.012]	0.017 [0.013]	0.016 [0.013]
No. Of Household Members	0.015*** [0.003]	0.019*** [0.003]	0.018*** [0.003]	0.015*** [0.003]	0.019*** [0.003]	0.018*** [0.003]
No. Of Children under 5	-0.024*** [0.009]	-0.020** [0.009]	-0.022** [0.009]	-0.024*** [0.007]	-0.020*** [0.007]	-0.022*** [0.007]
Female Headed HH	0.063*** [0.014]	0.064*** [0.014]	0.062*** [0.013]	0.063*** [0.012]	0.064*** [0.012]	0.062*** [0.012]
Poor Household	0.168*** [0.019]	0.144*** [0.019]	0.140*** [0.020]	0.168*** [0.016]	0.144*** [0.017]	0.140*** [0.018]
Access to Infrastructure	-0.019 [0.036]	0.010 [0.037]	-0.014 [0.041]	-0.019 [0.030]	0.010 [0.031]	-0.014 [0.034]
Access to Durable Goods	-0.475*** [0.037]	-0.481*** [0.038]	-0.444*** [0.038]	-0.475*** [0.032]	-0.481*** [0.033]	-0.444*** [0.033]
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Ethnicity Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Urban Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Municipality Dummy	No	No	Yes	No	No	Yes
Department Dummy	No	Yes	No	No	Yes	No
Region Dummy	Yes	No	No	Yes	No	No
Clustered on HH Level	Yes	Yes	Yes	No	No	No
Constant	152.3*** [52.46]	-228.0** [115.0]	-241.7 [527.6]	152.3*** [44.15]	-228.0** [95.97]	-241.7 [448.2]
Observations	26554	26554	26554	26554	26554	26554
R-Squared	0.052	0.072	0.091	0.052	0.072	0.091

*** p<0.01, ** p<0.05, * p<0.1

Table 10: OLS Results, Children 5-12. Dependent Variable: Has Health Insurance

	[1]	[2]	[3]	[4]	[5]	[6]
Displaced	-0.124*** [0.022]	-0.119*** [0.022]	-0.123*** [0.022]	-0.124*** [0.016]	-0.119*** [0.016]	-0.123*** [0.016]
Age in years	-0.013*** [0.002]	-0.013*** [0.002]	-0.012*** [0.002]	-0.013*** [0.002]	-0.013*** [0.002]	-0.012*** [0.002]
Child is Female	-0.007** [0.004]	-0.008** [0.004]	-0.008** [0.004]	-0.007** [0.004]	-0.008** [0.004]	-0.008** [0.004]
Years of Education	0.017*** [0.002]	0.017*** [0.002]	0.015*** [0.002]	0.017*** [0.002]	0.017*** [0.002]	0.015*** [0.002]
<i>Familias en Acción</i> Dummy	0.055*** [0.005]	0.064*** [0.005]	0.061*** [0.006]	0.055*** [0.004]	0.064*** [0.004]	0.061*** [0.005]
No. Of Household Members	-0.005*** [0.001]	-0.004*** [0.001]	-0.004*** [0.001]	-0.004*** [0.001]	-0.004*** [0.001]	-0.004*** [0.001]
No. Of Children under 5	-0.003 [0.004]	-0.003 [0.004]	-0.003 [0.003]	-0.003 [0.003]	-0.003 [0.003]	-0.003 [0.003]
Female Headed HH	-0.003 [0.005]	-0.005 [0.005]	-0.005 [0.005]	-0.003 [0.004]	-0.005 [0.004]	-0.005 [0.004]
Poor Household	0.008 [0.007]	0.006 [0.008]	0.002 [0.008]	0.008 [0.006]	0.006 [0.006]	0.002 [0.006]
Access to Infrastructure	0.030** [0.015]	0.049*** [0.015]	0.037** [0.017]	0.030*** [0.011]	0.049*** [0.011]	0.037*** [0.013]
Access to Durable Goods	0.159*** [0.015]	0.150*** [0.015]	0.154*** [0.015]	0.159*** [0.011]	0.150*** [0.012]	0.154*** [0.012]
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Ethnicity Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Urban Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Municipality Dummy	No	No	Yes	No	No	Yes
Department Dummy	No	Yes	No	No	Yes	No
Region Dummy	Yes	No	No	Yes	No	No
Clustered on HH Level	Yes	Yes	Yes	No	No	No
Constant	60.68*** [18.79]	66.93 [46.13]	248.8 [258.8]	60.68*** [14.44]	66.93** [31.51]	248.8 [187.1]
Observations	26527	26527	26527	26527	26527	26527
R-Squared	0.043	0.059	0.093	0.043	0.059	0.093

*** p<0.01, ** p<0.05, * p<0.1

Table 11: OLS Results, Children 5-12. Dependent Variable: Had Health Problem

	[1]	[2]	[3]	[4]	[5]	[6]
Displaced	0.028** [0.014]	0.031** [0.014]	0.028* [0.014]	0.028** [0.012]	0.031** [0.012]	0.028** [0.013]
Age in years	-0.007*** [0.002]	-0.006*** [0.002]	-0.006*** [0.002]	-0.007*** [0.002]	-0.006*** [0.002]	-0.006*** [0.002]
Child is Female	-0.002 [0.004]	-0.001 [0.004]	-0.000 [0.004]	-0.002 [0.004]	-0.001 [0.004]	-0.000 [0.004]
Years of Education	0.002 [0.002]	0.002 [0.002]	0.001 [0.002]	0.002 [0.002]	0.002 [0.002]	0.001 [0.002]
<i>Familias en Acción</i> Dummy	-0.007 [0.004]	-0.009** [0.005]	-0.010** [0.005]	-0.007* [0.004]	-0.009** [0.004]	-0.010** [0.004]
No. Of Household Members	-0.009*** [0.001]	-0.009*** [0.001]	-0.009*** [0.001]	-0.009*** [0.001]	-0.009*** [0.001]	-0.009*** [0.001]
No. Of Children under 5	-0.001 [0.003]	-0.000 [0.003]	0.000 [0.003]	-0.001 [0.002]	-0.000 [0.002]	0.000 [0.002]
Female Headed HH	0.008* [0.005]	0.010** [0.005]	0.009* [0.005]	0.008* [0.004]	0.010** [0.004]	0.009** [0.004]
Poor Household	-0.001 [0.006]	0.001 [0.006]	0.002 [0.007]	-0.001 [0.006]	0.001 [0.006]	0.002 [0.006]
Access to Infrastructure	-0.009 [0.011]	-0.013 [0.011]	-0.021 [0.013]	-0.009 [0.010]	-0.013 [0.010]	-0.021* [0.011]
Access to Durable Goods	0.049*** [0.012]	0.056*** [0.013]	0.052*** [0.013]	0.049*** [0.011]	0.056*** [0.011]	0.052*** [0.012]
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Ethnicity Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Urban Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Municipality Dummy	No	No	Yes	No	No	Yes
Department Dummy	No	Yes	No	No	Yes	No
Region Dummy	Yes	No	No	Yes	No	No
Clustered on HH Level	Yes	Yes	Yes	No	No	No
Constant	-1.09 [15.37]	25.14 [29.48]	-78.76 [135.7]	-1.09 [14.00]	25.14 [27.77]	-78.76 [144.9]
Observations	26554	26554	26554	26554	26554	26554
R-Squared	0.016	0.021	0.037	0.016	0.021	0.037

*** p<0.01, ** p<0.05, * p<0.1

Table 12: OLS Results, Children 13-18. Dependent Variable: Height-for-Age Standard Deviation

	[1]	[2]	[3]	[4]	[5]	[6]
Displaced	0.001 [0.069]	0.002 [0.070]	-0.014 [0.069]	0.001 [0.060]	0.002 [0.060]	-0.014 [0.060]
Age in years	0.079*** [0.007]	0.078*** [0.007]	0.079*** [0.007]	0.079*** [0.007]	0.078*** [0.007]	0.079*** [0.007]
Child is Female	-1.157*** [0.018]	-1.157*** [0.018]	-1.162*** [0.018]	-1.157*** [0.018]	-1.157*** [0.018]	-1.162*** [0.018]
Years of Education	0.089*** [0.006]	0.090*** [0.006]	0.092*** [0.006]	0.089*** [0.005]	0.090*** [0.005]	0.092*** [0.005]
<i>Familias en Acción</i> Dummy	-0.132*** [0.025]	-0.129*** [0.025]	-0.115*** [0.026]	-0.132*** [0.023]	-0.129*** [0.024]	-0.115*** [0.024]
No. Of Household Members	-0.023*** [0.005]	-0.022*** [0.005]	-0.020*** [0.005]	-0.023*** [0.005]	-0.022*** [0.005]	-0.020*** [0.005]
No. Of Children under 5	-0.036** [0.015]	-0.042*** [0.015]	-0.041*** [0.015]	-0.036*** [0.014]	-0.042*** [0.014]	-0.041*** [0.014]
Dummy: Respondent	-0.154 [0.118]	-0.170 [0.116]	-0.148 [0.119]	-0.154 [0.118]	-0.170 [0.116]	-0.148 [0.119]
Female Headed HH	-0.021 [0.021]	-0.024 [0.021]	-0.021 [0.022]	-0.021 [0.020]	-0.024 [0.020]	-0.021 [0.020]
Poor Household	-0.122*** [0.030]	-0.134*** [0.030]	-0.124*** [0.032]	-0.122*** [0.027]	-0.134*** [0.028]	-0.124*** [0.030]
Access to Infrastructure	0.061 [0.058]	0.117* [0.061]	0.145** [0.067]	0.061 [0.053]	0.117** [0.056]	0.145** [0.062]
Access to Durable Goods	0.551*** [0.061]	0.513*** [0.062]	0.489*** [0.063]	0.551*** [0.056]	0.513*** [0.057]	0.489*** [0.058]
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Ethnicity Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Urban Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Municipality Dummy	No	No	Yes	No	No	Yes
Department Dummy	No	Yes	No	No	Yes	No
Region Dummy	Yes	No	No	Yes	No	No
Clustered on HH Level	Yes	Yes	Yes	No	No	No
Constant	-110.7 [77.23]	-282.6 [172.4]	-302.6 [491.6]	-110.7 [72.19]	-282.6* [158.5]	-302.6 [558.0]
Observations	14886	14886	14886	14886	14886	14886
R-Squared	0.328	0.333	0.351	0.328	0.333	0.351

*** p<0.01, ** p<0.05, * p<0.1

Table 13: OLS Results, Children 13-18. Dependent Variable: Subjective Health

	[1]	[2]	[3]	[4]	[5]	[6]
Displaced	0.106** [0.049]	0.092* [0.049]	0.097** [0.048]	0.106** [0.046]	0.092** [0.046]	0.097** [0.046]
Age in years	0.034*** [0.005]	0.033*** [0.005]	0.035*** [0.005]	0.034*** [0.005]	0.033*** [0.005]	0.035*** [0.005]
Child is Female	0.095*** [0.014]	0.095*** [0.014]	0.098*** [0.014]	0.095*** [0.014]	0.095*** [0.014]	0.098*** [0.014]
Years of Education	-0.027*** [0.004]	-0.027*** [0.004]	-0.027*** [0.004]	-0.027*** [0.004]	-0.027*** [0.004]	-0.027*** [0.004]
<i>Familias en Acción</i> Dummy	0.075*** [0.020]	0.045** [0.020]	0.042** [0.020]	0.075*** [0.018]	0.045** [0.018]	0.042** [0.019]
No. Of Household Members	0.005 [0.004]	0.009** [0.004]	0.010** [0.004]	0.005 [0.004]	0.009** [0.004]	0.010** [0.004]
No. Of Children under 5	-0.018 [0.013]	-0.015 [0.012]	-0.018 [0.012]	-0.018* [0.011]	-0.015 [0.011]	-0.018 [0.011]
Dummy: Respondent	-0.033 [0.107]	-0.044 [0.105]	-0.031 [0.108]	-0.033 [0.107]	-0.044 [0.105]	-0.031 [0.108]
Female Headed HH	0.072*** [0.017]	0.070*** [0.017]	0.067*** [0.017]	0.072*** [0.015]	0.070*** [0.015]	0.067*** [0.015]
Poor Household	0.108*** [0.024]	0.083*** [0.024]	0.062** [0.025]	0.108*** [0.021]	0.083*** [0.022]	0.062*** [0.023]
Access to Infrastructure	-0.049 [0.046]	-0.022 [0.048]	-0.051 [0.054]	-0.049 [0.040]	-0.022 [0.042]	-0.051 [0.048]
Access to Durable Goods	-0.449*** [0.050]	-0.470*** [0.051]	-0.439*** [0.051]	-0.449*** [0.044]	-0.470*** [0.045]	-0.439*** [0.046]
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Ethnicity Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Urban Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Municipality Dummy	No	No	Yes	No	No	Yes
Department Dummy	No	Yes	No	No	Yes	No
Region Dummy	Yes	No	No	Yes	No	No
Clustered on HH Level	Yes	Yes	Yes	No	No	No
Constant	200.9*** [62.25]	-90,95 [124.1]	-488,8 [389.7]	200.9*** [54.58]	-90,95 [113.0]	-488,8 [351.1]
Observations	16545	16545	16545	16545	16545	16545
R-Squared	0.047	0.068	0.093	0.047	0.068	0.093

*** p<0.01, ** p<0.05, * p<0.1

Table 14: OLS Results, Children 13-18. Dependent Variable: Has Health Insurance

	[1]	[2]	[3]	[4]	[5]	[6]
Displaced	-0.144*** [0.029]	-0.142*** [0.028]	-0.138*** [0.028]	-0.144*** [0.022]	-0.142*** [0.022]	-0.138*** [0.022]
Age in years	-0.012*** [0.002]	-0.011*** [0.002]	-0.010*** [0.002]	-0.012*** [0.002]	-0.011*** [0.002]	-0.010*** [0.002]
Child is Female	-0.010** [0.004]	-0.009* [0.005]	-0.008* [0.005]	-0.010** [0.005]	-0.009* [0.005]	-0.008* [0.005]
Years of Education	0.012*** [0.002]	0.010*** [0.002]	0.010*** [0.002]	0.012*** [0.001]	0.010*** [0.001]	0.010*** [0.001]
<i>Familias en Acción</i> Dummy	0.042*** [0.007]	0.053*** [0.007]	0.046*** [0.007]	0.042*** [0.006]	0.053*** [0.006]	0.046*** [0.006]
No. Of Household Members	-0.001 [0.002]	-0.001 [0.002]	-0.000 [0.002]	-0.001 [0.001]	-0.001 [0.001]	-0.000 [0.001]
No. Of Children under 5	-0.005 [0.005]	-0.004 [0.005]	-0.005 [0.005]	-0.005 [0.004]	-0.004 [0.004]	-0.005 [0.004]
Dummy: Respondent	-0.052 [0.051]	-0.047 [0.051]	-0.045 [0.052]	-0.052 [0.051]	-0.047 [0.051]	-0.045 [0.051]
Female Headed HH	-0.010 [0.006]	-0.012* [0.006]	-0.010 [0.006]	-0.010* [0.005]	-0.011** [0.005]	-0.010* [0.005]
Poor Household	0.019** [0.009]	0.017* [0.009]	0.007 [0.010]	0.019*** [0.007]	0.017** [0.008]	0.007 [0.008]
Access to Infrastructure	0.020 [0.018]	0.041** [0.018]	0.043** [0.020]	0.020 [0.014]	0.041*** [0.015]	0.043** [0.017]
Access to Durable Goods	0.092*** [0.019]	0.090*** [0.019]	0.103*** [0.019]	0.092*** [0.016]	0.090*** [0.016]	0.103*** [0.016]
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Ethnicity Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Urban Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Municipality Dummy	No	No	Yes	No	No	Yes
Department Dummy	No	Yes	No	No	Yes	No
Region Dummy	Yes	No	No	Yes	No	No
Clustered on HH Level	Yes	Yes	Yes	No	No	No
Constant	-53.71 [22.23]	-64.52** [32.37]	-41.81 [79.25]	-53.71 [18.45]	-64.52** [28.49]	-41.81 [77.85]
Observations	16520	16520	16520	16520	16520	16520
R-Squared	0.034	0.047	0.084	0.034	0.047	0.084

*** p<0.01, ** p<0.05, * p<0.1

Table 15: OLS Results, Children 13-18. Dependent Variable: Had Health Problem

	[1]	[2]	[3]	[4]	[5]	[6]
Displaced	0.002 [0.015]	0.001 [0.015]	-0.001 [0.015]	0.002 [0.014]	0.001 [0.014]	-0.001 [0.014]
Age in years	0.003** [0.001]	0.003** [0.001]	0.003** [0.001]	0.003** [0.001]	0.003** [0.001]	0.003** [0.001]
Child is Female	0.016*** [0.004]	0.016*** [0.004]	0.015*** [0.004]	0.016*** [0.004]	0.016*** [0.004]	0.015*** [0.004]
Years of Education	0.000 [0.001]	0.000 [0.001]	-0.000 [0.001]	0.000 [0.001]	0.000 [0.001]	-0.000 [0.001]
<i>Familias en Acción</i> Dummy	0.007 [0.006]	0.005 [0.006]	0.009 [0.006]	0.007 [0.005]	0.005 [0.006]	0.009 [0.006]
No. Of Household Members	-0.006*** [0.001]	-0.006*** [0.001]	-0.006*** [0.001]	-0.006*** [0.001]	-0.006*** [0.001]	-0.006*** [0.001]
No. Of Children under 5	-0.001 [0.003]	-0.001 [0.003]	-0.002 [0.003]	-0.001 [0.003]	-0.001 [0.003]	-0.002 [0.003]
Dummy: Respondent	0.159*** [0.055]	0.159*** [0.056]	0.159*** [0.055]	0.159*** [0.055]	0.159*** [0.056]	0.159*** [0.055]
Female Headed HH	-0.002 [0.005]	-0.000 [0.005]	-0.002 [0.005]	-0.002 [0.005]	-0.000 [0.005]	-0.002 [0.005]
Poor Household	-0.006 [0.007]	-0.005 [0.007]	0.001 [0.008]	-0.006 [0.007]	-0.005 [0.007]	0.001 [0.007]
Access to Infrastructure	0.016 [0.012]	0.010 [0.012]	0.009 [0.014]	0.016 [0.012]	0.010 [0.012]	0.009 [0.014]
Access to Durable Goods	0.019 [0.014]	0.022 [0.014]	0.020 [0.015]	0.019 [0.013]	0.022 [0.014]	0.020 [0.014]
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Ethnicity Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Urban Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Municipality Dummy	No	No	Yes	No	No	Yes
Department Dummy	No	Yes	No	No	Yes	No
Region Dummy	Yes	No	No	Yes	No	No
Clustered on HH Level	Yes	Yes	Yes	No	No	No
Constant	12.49 [16.56]	39.03 [34.31]	201.2* [106.7]	12.49 [15.79]	39.03 [32.15]	201.2* [110.3]
Observations	16545	16545	16545	16545	16545	16545
R-Squared	0.017	0.02	0.038	0.017	0.02	0.038

*** p<0.01, ** p<0.05, * p<0.1

Table 16: Comparison Propensity Score Matching and OLS results of Children 0-4

Dependent variable: Height-for-Age Z-Score						
	Nearest Neighbor	Stratification	Kernel	OLS	OLS	OLS
ATT	-0.135 [0.112]	-0.183** [0.074]	-0.267*** [0.072]	-0.129** [0.065]	-0.145** [0.065]	-0.136** [0.066]
Observations	588	16260	16252	15496	15496	15496
Treatment	291	290	291			
Controls	297	15970	15961			
Dummies				regions	departments	municipalities
Dependent variable: Subjective Health						
	Nearest Neighbor	Stratification	Kernel	OLS	OLS	OLS
ATT	0.076 [0.076]	0.157*** [0.057]	0.197*** [0.053]	0.139** [0.056]	0.111** [0.055]	0.111** [0.056]
Observations	599	16260	16252	16425	16425	16425
Treatment	291	290	291			
Controls	308	15970	15961			
Dummies				regions	departments	municipalities
Dependent variable: Has Health Insurance						
	Nearest Neighbor	Stratification	Kernel	OLS	OLS	OLS
ATT	-0.159*** [0.034]	-0.158*** [0.024]	-0.154*** [0.027]	- 0.154*** [0.032]	-0.145*** [0.031]	-0.158*** [0.031]
Observations	598	16260	16252	16388	16388	16388
Treatment	291	290	291			
Controls	307	15970	15961			
Dummies				regions	departments	municipalities
Dependent variable: Had Health Problem Last Month						
	Nearest Neighbor	Stratification	Kernel	OLS	OLS	OLS
ATT	-0.005 [0.03]	0.005 [0.022]	-0.005 [0.021]	0.009 [0.023]	0.016 [0.023]	0.017 [0.023]
Observations	599	16260	16252	16425	16425	16425
Treatment	291	290	291			
Controls	308	15970	15961			
Dummies				regions	departments	municipalities

*** p<0.01, ** p<0.05, * p<0.1

Table 17: Comparison Propensity Score Matching and OLS results of Children 5-12

Dependent variable: Height-for-Age Standard Deviation						
	Nearest Neighbor	Stratification	Kernel	OLS	OLS	OLS
ATT	-0.143*** [0.038]	-0.132*** [0.036]	-0.175*** [0.043]	0.004 [0.044]	0.002 [0.044]	-0.015 [0.044]
Observations	25097	34119	26582	25022	25022	25022
Treatment	687	687	687			
Controls	24410	33432	25905			
Dummies				regions	departments	municipalities
Dependent variable: Subjective Health						
	Nearest Neighbor	Stratification	Kernel	OLS	OLS	OLS
ATT	0.151*** [0.030]	0.154*** [0.033]	0.179*** [0.032]	0.118*** [0.040]	0.0895** [0.040]	0.103*** [0.039]
Observations	26592	34119	26592	26554	26554	26554
Treatment	687	687	687			
Controls	25905	33432	25905			
Dummies				regions	departments	municipalities
Dependent variable: Has Health Insurance						
	Nearest Neighbor	Stratification	Kernel	OLS	OLS	OLS
ATT	-0.130*** [0.014]	-0.131*** [0.016]	-0.132*** [0.017]	- 0.124*** [0.022]	-0.119*** [0.022]	-0.123*** [0.022]
Observations	26564	34119	26592	26527	26527	26527
Treatment	687	687	687			
Controls	25877	33432	25905			
Dummies				regions	departments	municipalities
Dependent variable: Had Health Problem Last Month						
	Nearest Neighbor	Stratification	Kernel	OLS	OLS	OLS
ATT	0.020 [0.013]	0.020 [0.012]	0.018 [0.011]	0.0278** [0.014]	0.031** [0.014]	0.028* [0.014]
Observations	26592	34119	26592	26554	26554	26554
Treatment	687	687	687			
Controls	25905	33432	25905			
Dummies				regions	departments	municipalities

*** p<0.01, ** p<0.05, * p<0.1

Table 18: Comparison Propensity Score Matching and OLS results of Children 13-18

Dependent variable: Height-for-Age Standard Deviation						
	Nearest Neighbor	Stratification	Kernel	OLS	OLS	OLS
ATT	-0.055 [0.109]	-0.041 [0.071]	-0.237*** [0.067]	0.001 [0.069]	0.002 [0.070]	-0.014 [0.069]
Observations	812	25240	16429	14886	14886	14886
Treatment	375	373	375			
Controls	437	24867	16054			
Dummies				regions	departments	municipalities
Dependent variable: Subjective Health						
	Nearest Neighbor	Stratification	Kernel	OLS	OLS	OLS
ATT	0.056 [0.065]	0.095* [0.050]	0.170*** [0.052]	0.106** [0.049]	0.092* [0.049]	0.097** [0.048]
Observations	900	25240	16429	16545	16545	16545
Treatment	375	373	375			
Controls	525	24867	16054			
Dummies				regions	departments	municipalities
Dependent variable: Has Health Insurance						
	Nearest Neighbor	Stratification	Kernel	OLS	OLS	OLS
ATT	-0.145*** [0.031]	-0.132*** [0.023]	-0.148*** [0.020]	- 0.144*** [0.029]	-0.142*** [0.028]	-0.138*** [0.028]
Observations	899	25240	16429	16520	16520	16520
Treatment	375	373	375			
Controls	524	24867	16054			
Dummies				regions	departments	municipalities
Dependent variable: Had Health Problem Last Month						
	Nearest Neighbor	Stratification	Kernel	OLS	OLS	OLS
ATT	0.024 [0.018]	0.005 [0.013]	-0.004 [0.016]	0.002 [0.015]	0.001 [0.015]	-0.001 [0.015]
Observations	900	25240	16429	16545	16545	16545
Treatment	375	373	375			
Controls	525	24867	16054			
Dummies				regions	departments	municipalities

*** p<0.01, ** p<0.05, * p<0.1