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Labor Supply Responses to Chronic Illness in Senegal

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Abstract

The prevalence of chronic diseases is projected to increase over the coming years in African countries. In a context of limited access to formal insurance, this paper investigates how individuals adjust their labor supply in response to a chronic disease affecting another household member. Using original individual panel data collected in Senegal, we find that adult men and boys significantly increase their labor supply in response to another member's chronic disease, in particular if the latter is a woman. Girls are more likely to work if a male member is chronically ill, and women if the ill member was working before the shock. This suggests that social norms regarding gender roles may be challenged when households have to compensate for earning losses or when the number of male members able to work is reduced. We also investigate the consequences of such a shock on the number of domestic hours performed and on children's human capital. Women largely increase their numbers hours spent on domestic activities which highlights a risk of work overload. These results have implications for health policies that should aim at reducing the burden of chronic diseases for households. Children's school enrollment does not seem to be adversely affected, which suggests that the coping mechanisms implemented help at least to protect this outcome.

JEL Classification: C33, D13, J22, J60, 012, I10
Keywords: Chronic health shock, Labor supply, Intra-household coping strategies, Extended families, Senegal

Résumé

Les projections suggèrent que la prévalence des maladies chroniques va augmenter dans les pays africains au cours des prochaines années. Etant donné l'accès limité des ménages de ce contexte à des outils formels d'assurance, cet article s'interroge sur la façon dont les individus ajustent leur offre de travail quand un membre de leur ménage tombe malade de façon chronique. Sur la base d'estimations avec données de panel, représentatives pour le Sénégal, nous montrons que les hommes adultes et les garçons augmentent considérablement leur offre de travail en réponse à la maladie d'un autre membre du ménage, en particulier si ce dernier est une femme. Les filles sont plus susceptibles de travailler si un homme tombe malade de façon chronique, les femmes si le membre tombant malade travaillait avant le choc. Ces résultats montrent notamment que les normes sociales relatives aux rôles des hommes et des femmes sont flexibles : une femme peut travailler quand il faut compenser une perte de revenu ou quand le nombre de membres masculins capables de travailler est réduit. Nous montrons également que les femmes augmentent considérablement leur temps de travail domestique, à la suite de la maladie chronique d'un autre membre de leur ménage. Ce résultat pointe le risque d'une surcharge de travail pour les femmes qui assument déjà une grande partie de ce travail et invite à penser des politiques de santé pour limiter ce risque. Nous ne trouvons pas d'effet négatif significatif sur la scolarisation des enfants. Les mécanismes d'ajustement informels mis en place permettent donc un lissage au moins sur la scolarisation des enfants.

Classification JEL : C33, D13, J22, J60, 012, I10
Mots clés: choc de santé chronique, Offre de travail, Stratégie d'adaptation intra-ménage, Familles élargies, Sénégal

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1 Introduction

According to the World Health Organization (2005), the burden of chronic diseases [1] is increasing worldwide. Projections suggest that African countries will experience the largest increase in death rates from cardiovascular disease, cancer, respiratory disease and diabetes (Aikins et al., 2010).[2] Aside from epidemiological studies documenting the chronic disease burden, there is few empirical evidence on the economic impacts of chronic diseases on households (Abegunde and Stanciole, 2008). Evidence on how individuals and households mitigate the adverse effects of such diseases has been starkly lacking, especially for African countries. This is partly because infectious diseases have long been the core priority of global health policies for developing countries (World Health Organization, 2005). Moreover, suitable longitudinal data to properly investigate the question remain scarce. Using original nationally representative individual panel data, this paper attempts to fill this gap by analyzing the labor supply adjustments of household members following a member's chronic illness in Senegal.

In contexts where formal insurance schemes are nascent, such as in Senegal,[3] households heavily rely on informal strategies (see Dercon (2002) and Cox and Fafchamps (2007)). Yet, as suggested by Weerdt and Fafchamps (2011), a chronic illness may reduce the set of informal shock-coping means available for households to address its negative consequences. Indeed, a chronic disease may challenge one's ability to generate income in the future. In a risk-sharing network, where a share of transfers is motivated by reciprocity, members who believe a chronically ill person will not be able to reciprocate in the future may not be willing to pursue the relationship and provide insurance against such a long term shock. Therefore, labor may be the only asset the poorest households are left with to cope with a chronic illness.

Labor supply adjustments can go both ways: on the one hand, household members may increase their labor supply to pay for medical expenditures and to compensate for the potential

[1] According to the World Health Organization definition, chronic diseases are "diseases of long duration and generally slow progression.

[2] In West Africa, between 2000 and 2012, the death rate due to noncommunicable diseases averaged 706 (per 100,000 population) with a maximum of 964 in Sierra Leone and a minimum of 482 in Cape Verde. In Senegal, the average is 558. Authors' computation from `http://gamapserver.who.int/gho/interactive_charts/ncd/mortality/total/atlas.html` .

[3] The National Social Protection Strategy (NSPS) was launched in 2005 to extend health insurance coverage to 50% of the population by 2015 and to provide insurance coverage against shocks affecting population working in agriculture and the informal sector (International Monetary Fund, 2007). Yet, less than 6% of individuals are formally covered according to our data collected in 2011.

income or productivity loss induced by a chronic illness; on the other hand, they may decrease their labor supply or postpone their entry in the labor market if they have to take care of the ill member, or if they have to sell their productive assets to pay for medical expenditures. Such adjustments made after a health shock are of prime interest since they may condition the ability of households to smooth their consumption in the short run and also have long lasting effects for individuals. Previous literature suggests that coping strategies implemented by households can turn out to be extremely costly in the long run if they involve, for instance, selling productive assets (Rosenzweig and Wolpin, 1993; Islam and Maitra, 2012), taking risks at work and jeopardizing workers' health (Robinson and Yeh, 2011)[4] or intensifying children's labor which may interfere with their education (Alam, 2015). Putting women at work to cope with a shock has ambiguous expected long-term effects. Some beneficial development effects can be expected for women and their children (Thomas et al., 1990; Duflo and Udry, 2004; Duflo, 2012) but they may also have to shoulder the "double burden" of performing both an economic activity and domestic chores, which could deter their psychological and physical status. These long-term consequences make more salient the need to better understand how individuals adjust their labor-supply in the short term in response to the chronic illness of another household member.

This paper has three objectives. First, it analyzes how individuals adjust their labor supply to cope with the chronic illness of one of their household member, accounting for potential differentiated effects following the characteristics of the ill member. Indeed, as suggested by Wagstaff (2007), responses are expected to differ depending on the age, gender and labor force status of the household member experiencing a health shock. Second, it examines the existence of substitution effects: does the illness of a household member induce changes in the number of domestic hours and in children's school enrollment? This question is of interest first because children's education is an important component of children's human capital accumulation that can be compromised by the occurrence of a shock, second because there is a risk of work overload or double burden for women, who already perform most of the domestic duties in the context of this study. Finally, we investigate how the burden of coping with one's illness shock is shared among members within a household depending on one's biological link to the ill

[4] Robinson and Yeh (2011) show that women who engage in transactional sex in Western Kenya, characterized by a high prevalence of HIV/AIDS, substantially increase their supply of risky, better-compensated sex to cope with unexpected health shocks, particularly the illness of another household member.

member. Senegalese households have an extended structure[5] and the burden may not be shared equally between household members. Specifically, we wonder whether those closest in terms of biological link to the ill member are more likely to modify their time use.

To answer our questions, we use original nationally representative individual panel data from the "Pauvreté et Structure Familiale" survey (thereafter PSF) collected in 2006/2007 and in 2011/2012 in Senegal. Since a chronic illness is unlikely to be an exogenous event, we adopt several strategies to limit endogeneity bias and estimate its causal effect on the labor supply (and other outcomes) of other household members. The panel structure and the richness of our data allow us to control for three kinds of confounding factors: (a) unobserved individual characteristics that are correlated with both the probability to have a chronic illness and work behavior, (b) sorting mechanisms leading individuals who share genes that are associated with a higher risk of chronic disease or who adopt risky behaviors that might damage their health to live together and (c) contemporary shocks potentially correlated with both changes in time use and in the probability to belong to household with a chronically ill member. Then, we address the potential selection issue related to the differences in the characteristics between the group of individuals with a chronically ill household member and the group of individuals with healthy household members. First, we add interaction terms between time and baseline characteristics that are believed to affect the outcome dynamics and whose distribution may differ across the two groups. Second, we re-estimate the effects of interest using semi-parametric difference-in-differences estimators following Abadie (2005)'s strategy.

We find that, men and boys significantly increase their labor supply in response to another member's chronic illness. Decomposing the effects by the characteristics of the ill member, we show that while men and children work more in response to the illness of an opposite sex member, women increase their labor supply if the member was a worker. The latter result suggests that the need to compensate for an income loss is an important driver of women's labor supply change. We also find that women increase their number of hours spent on domestic activities, and therefore highlight a risk of work overload for them. One important implication of providing universal health coverage could be to limit such a risk. Besides, children's school enrollment does not seem to be adversely affected. This suggests that coping mechanisms are able to

[5]According to our data, in 2006, the average size is 8 members, polygyny was widely practiced (40% of currently married women were in a polygamous union), in 26% of households at least three generations of individuals live together, and 30% of households were involved in child fostering.

protect to some extent children's education. Finally, our within-household analysis shows that women's responses vary with their biological link to the ill member: mothers and spouses of a ill member work more than other women in the household. Women from the more distant kin group increase their domestic work as substitutes for other women.

We contribute to the literature in several ways. To the best of our knowledge, this paper is the first to investigate how individuals adjust their labor supply following a chronic illness shock affecting another household member for a West African country. In a consistent framework, it also investigates the effect of chronic illness on other decisions relative to time use, domestic hours and schooling, to evaluate the burden that some labor supply adjustments may induce, either directly or indirectly, on children's human capital accumulation, and on women's physical and psychological status. Indeed, in Senegal, gender roles are sharply defined. Women are mainly in charge of the domestic chores and the probability that women face a double burden when they have to manage the chronic illness of another household member is high. We also contribute to a better understanding of the roles of each member within an extended household structure, that is widespread in Senegal, in the coping process since the richness of our data allow us to precisely define the link between all members (and not only to the household head as in previous studies). Many West African countries share similar characteristics with Senegal. They face an increasing burden from chronic diseases while the coverage of the population by formal health insurance remains low. In this respect, our results can shed some light on the coping mechanisms implemented by West African households to respond to a chronic illness affecting one of its member.

The remainder of the paper is structured as follows. The next section briefly presents the existing literature on the effect of one's health shock, chronic or not, on other household members' decisions. Section 3 describes the context of study and the data used. It also provides some statistics related to chronic illness shocks and to time use for individuals of our sample. Section 4 presents our empirical model and estimates of the effect of a chronic health shock on household members' time allocation. Section 5 assesses the robustness of our results by correcting for selection and attrition biases. Section 6 explores the question of how the chronic illness burden is shared between members in extended households. Lastly, Section 7 concludes.

2 Literature review

2.1 Consequences of illnesses in developing countries

This paper relates to the microeconomic literature on the economic consequences of health shocks in developing countries. In case of illness, households face both direct and indirect costs. Health care expenditures often have to be financed through out-of-pocket payments, which increases the risk that households slide into poverty (known as the "medical poverty trap") (Whitehead et al., 2001). Health shocks also induce indirect costs such as earning losses from the ill member if she gets limited in her ability to work and from the caregivers if they have to quit their jobs to take care of the sick member. They may also compromise future earnings if, for instance, productive assets are sold to respond to the shock, or if young members have to leave school early to care for ill members or to work (Gertler and Gruber, 2002; Russell, 2004; Leive and Xu, 2008; Genoni, 2012; Wagstaff and Lindelow, 2014). These costs question the ability of households to respond to such a shock and to maintain their level of non-health consumption.

To limit the adverse consequences of a shock and smooth their consumption, households adopt coping strategies, such as seeking assistance or transfers from the extended family or friends, dissaving, selling assets, borrowing, or put children or inactive members at work (Gertler and Gruber, 2002; Wagstaff, 2007; Wagstaff and Lindelow, 2014). Audibert and Etard (2003) show that a ill worker can often rely on her family to help him carry out her job and maintain productivity levels in rural Mali. However, changes in other household members' labor supply and intra-household substitution in activities crucially depend on the household size and composition (Sauerborn et al., 1996).

Only a few papers evaluate the differentiated effects of a illness shock on time use for all the members of the family[6] and depending on the initial characteristics and the link to the ill member. In Vietnam, Wagstaff (2007) finds that the hospitalization of a working member has a negative effect on the earned income in rural areas, while the hospitalization of a non working member is rather associated with an increase in unearned income. Thus, the labor status that preceding the shock conditions the type of coping strategy implemented by household

[6]Most papers that evaluate the effect of a illness usually investigate household response as a whole and do not differentiate individual responses of its members, or focus on a subgroup such as adults, women or children.

members. Alam (2015) finds that a father's illness reduces children's school attendance due to income constraints in Tanzania. However, mother's illness has no effect, which suggests that the identity of the ill member may matter for educational outcomes.

The specific effects of *chronic* diseases on individuals' time use related decisions remain largely understudied in the literature. Compared to non-chronic illnesses, chronic ones are expected to induce more labor supply adjustments from other household members. Indeed, chronic illnesses are expected to reduce the set of informal shock-coping means available for households to address its negative consequences because they challenge one's ability to generate income in the future (Weerdt and Fafchamps, 2011). In a risk-sharing network, where exchanges of services are partly motivated by reciprocity, members who believe the person who has become ill will not be able to reciprocate in the future may not be willing to pursue the relationship and transfer the requested amount. Therefore, labor may be the only asset left to the poorest households to cope with chronic illness. Abegunde and Stanciole (2008) find that chronic diseases are associated with a decrease in labor supply and labor income at the household level in Russia. However, they do not assess the effects at the individual level and possible substitution in labor within the household. In India, cancers-affected households are found to have lower labor force participation rates than non-affected households, however, labor force participation rates are higher among adults members in affected households once the individual with cancer was excluded (Mahal et al., 2013). A similar analysis on heart diseases in India finds a lower labor force participation in cardiovascular diseases-affected households (Karan et al., 2014). However, they cannot distinguish if this result is driven by the decline in the ill member participation or by an increase in care-giving at the expense of work for other household members. These last two studies rely on matching methods that cannot account for unobservables factors that explain both the risk of having a cancer and a heart disease and labor force participation. To the best of our knowledge, there is no paper exploring the question of how individuals adjust their labor supply in response to another members' *chronic* disease in a sub-Saharan African country. For the sub-continent, focus has been put on the economic consequences for households of AIDS-related morbidity and mortality (see for instance Beegle (2005), Bignami-Van Assche et al. (2011)).

2.2 Qualitative and quantitative evidence on intra-household adjustments following a shock in Senegal

The family is a key pillar of support to the individuals in Senegal,. Based on a qualitative survey conducted in urban Senegal, Evans et al. (2016) provide a general overview on how family members rely on each other and provide reciprocal support in time of crisis. In case of illness or death of a family member, individuals are expected to share the burden depending on their responsibilities within the household. Following prevailing norms on gender roles[7], men are expected to be mainly responsible for the financial costs of medical treatment while women are more responsible for care giving and domestic work. Children generally take on considerable caring roles for chronically ill and elderly relatives (Evans, 2010). Among siblings, the eldest child generally exercise authority over the younger siblings, and is expected to endorse more responsibilities (of providing care or financial support) in case of a shock.

Using the same data as in this paper, De Vreyer and Nilsson (2016) investigate the consequences of prime-age adult death in a household on children's outcomes. Accounting for the complex structure of Senegalese households, they find that children who are not under the direct responsibility of the deceased do not enroll less in school whereas children who are do and conclude to the limits of within-household informal arrangements as a smoothing mechanism. These elements suggest that careful attention should be paid to the identity of the ill member when dealing with the consequences of one's chronic illness on other members' labor outcomes.

3 Description of data

3.1 The PSF survey

This study relies on individual panel data from the survey entitled "Pauvreté et Structure Familiale" conducted in Senegal in 2006-2007 (baseline survey) and in 2011-2012 (follow-up

[7] A woman is expected to be a good wife and a good mother, to take care of the houseworks and children. A famous wolof proverb illustrates this idea and says "*liggeey nday muy añu doom*" which can be literally traduced by *"the work of the mother is the lunch of the child"*. It actually means that "*mother's deeds are reflected by her children's success or failure in life; if she has been a good wife her children will succeed in life, if not they will fail*" (Diame, 2011). A man has the responsibility of earning money in order to support his family (as enshrined in the Family Code).

survey).[8] Baseline survey is a nationally representative survey covering 1,781 households (14,379 individuals), spread over 150 clusters drawn randomly from the census districts to ensure a geographically representative sample. In 2011-2012, 84% of individuals were found and re-interviewed. Among the 16% who were not found, a quarter had died, and 15% had migrated internationally. Potential bias due to selection in attrition is investigated in Section 5.

This survey covers the usual information on individual and household characteristics. It has several features that make it particularly suited for our analysis. Its longitudinal dimension and its richness allow us to control for different confounding factors detailed in Section 4. The survey also details, for each respondent, their relationship not only to the household head, but also to their cell head[9]. This allows us to identify in the household, for each individual, who are their parents, mother's co-wife(ves), children, siblings, spouse, or co-wife(ves). In addition to helping document the extended structure of Senegalese households, this information allows us to answer the question of who in a household is more likely to modify her time use following a member's chronic illness.

Our estimation sample consists of 7,363 individuals interviewed for both rounds (balanced panel), aged between 6 and 58 years old in the first round.[10] This sample is divided into the "adult sample" composed of 5,112 individuals (15-58 years old)[11] and the "child sample" which consists of 2,251 children (6-14). All these individuals belong to 1,456 origin households in 2006.

[8]The PSF survey results from a cooperation between a team of French researchers and the National Statistical Agency of Senegal. Momar B. Sylla and Matar Gueye (ANSD), Philippe De Vreyer (Université Paris-Dauphine, PSL Research University, IRD, LEDa, UMR DIAL), Sylvie Lambert (PSE), and Abla Safir (World Bank) designed the survey. The data collection was conducted by the ANSD thanks to the funding of the IDRC (International Development Research Center), INRA Paris, and CEPREMAP. The survey is described in details in De Vreyer et al. (2008).

[9]Households are divided into subgroups (or cells) according to the following rule: the household head and unaccompanied dependent members, such as widowed parents or children whose mothers do not live in the same household, are grouped together. Then, each wife and her children and, potentially any other dependent under her care, constitute a separate group. Finally, any other family nucleus, such as a married child of the household head with his/her spouse and children also form separate groups. This decomposition emerged from field interviews as the relevant way to split households into groups.

[10]Note that the sample initially comprised 9,034 individuals aged between 6 and 58 years old interviewed in both rounds; 7,363 corresponds to the final sample of analysis with no missing data on the main variables for the two rounds and on the baseline characteristics described in Table 2. In the robustness analysis, we check whether the final sample is selected due to dropping observations with missing values and due to attrition, and we apply correction techniques to address this issue.

[11]15-64 is the standard age range for the working age population according to ILO standards. We restrict it to those younger than 58, since those above this age are older than 64 at the time of the second round.

3.2 Description of the variables

The chronic illness measure

Our variable of interest is a dummy equal to one if the individual has at least another baseline household member affected by a chronic illness that has started after the end of the first interview and zero otherwise.[12] A baseline household member is identified as being affected by a chronic illness during the two rounds of interview if she positively answers the question "*Do you suffer from any chronic or long-term disease or any handicap?*," and if the disease occurred after the end of the first round using the question "*For how long have you suffered from this condition?*" and the date of the baseline survey. Therefore, this measure is computed independently from the baseline health status. Our individual fixed effect specification should remove the bias due to past chronic health shocks affecting both the probability that a household member suffers from a new chronic disease and one's work behavior.

A concern with the use of self-reported chronic illness is the potential measurement error. Responses regarding health are usually affected by respondents' perception and understanding of their own health. However, the emergence of a new serious health condition is expected to be less misreported by respondents than self-reported assessment of their health status (Gupta et al., 2015).[13] Moreover, the positive correlation between the report of a chronic illness and the total amount of individual medical expenditures during the past year supports the reliability of our measure (see Table S1 in the Supplementary Materials).

The survey also details the type of chronic, long-term diseases or handicap of the ill individual. More than a third of the women suffer from blood pressure between the two rounds, 8% from rheumatism and 7% from blood pressure, 6% from a handicap, 5% from diabetes. 10% of men declared a skin disease, 9% a physical or mental handicap; 8% suffer from blood pressure, another 8% from diabetes and 5% from heart problems. In our analysis, we are unfortunately unable to distinguish clearly the effects for these different types of chronic, long-term diseases or handicaps since more than a third of women and close to half of the men declared they suffer

[12] Chronic illnesses affecting any new member arrived in the household between the two rounds are not included in our measure. Death events are also excluded from our measure but our results are robust to their inclusion in the sets of covariates (in the specification accounting for other shocks that occurred between the two rounds). See De Vreyer and Nilsson (2016) for a study of the effects of death events in Senegalese households on children's outcomes.

[13] The literature suggests this measurement error also depends on the respondent's characteristics (such as education, income, and access to health-care facilities) (Strauss and Thomas, 1998) and gender (Hosseinpoor et al., 2012; Caroli and Weber-Baghdiguian, 2016).

from a non-listed chronic/long-term disease or handicap. One reason could be that the list of diseases provided in the survey was not exhaustive. According to the 2010 Demographic and Health Survey (DHS), asthma and chronic bronchitis also have a high prevalence[14] in Senegal and may constitute a non negligible share of "other disease" declared by the PSF respondents because they were not listed in the proposed answers. Figure 1 in the Supplementary Materials further describes the distribution of individuals who have fallen ill chronically between the two rounds by age. Unsurprisingly, the risk of such an event increases with age. This is especially true for women.

The outcomes

Our main outcome of interest describing work behavior is a dummy equal to 1 if: (1) the respondent declares she was working the previous week, even for one hour; (2) she declares she was not working the previous week but nevertheless performed an economic activity[15] during the previous seven days; or (3) she has a job even if she was absent from work during the previous week for a temporary reason. This measure has the advantage of considering all economic activities performed by individuals, including those plausibly not considered as actual "work" by the respondent (in the first question), and thus reduces the practical and ideological bias in the female work measurement (Beneria, 1981). Note that since labor modules are not strictly comparable between the two rounds, we used retrospective data on labor history from the 2011 data and rebuilt each individual's work status at the date of the first-round interview.[16]

Our secondary outcomes of interest are related to other activities than labor performed by household members: domestic work and schooling for children. Domestic work is measured by the number of hours spent on domestic activities during a typical week in the previous month. The following activities are considered: home maintenance, preparing food, doing the laundry, buying food, collecting water, collecting firewood, caring for the cattle, taking care of children,

[14] Asthma and chronic bronchitis affect 3.4% of the 15-49 years old women (and represent 18% of the chronic diseases declared) and 3.7% of 15-59 years old men (and represent 35% of the chronic diseases declared) (Agence Nationale de la Statistique et de la Démographie - ANSD/Sénégal and ICF International, 2012). The more widespread chronic diseases declared in DHS (blood pressure, heart diseases, diabetes, paralysis) are coherent with those declared in the PSF survey (at the exception of asthma and chronic bronchitis).

[15] The following economic activities are considered: selling something in the street or a shop; washing, doing laundry, or doing the cleaning for another household; making products or preparing food for sale; repairing a device or rendering a service for money; working in a field, cultivating crops, caring for cattle; an apprenticeship; or any other paid activity.

[16] As a robustness check, we also perform the same estimation of the work status declared at each round of interview.

elderly or sick household members or non members. A recurring issue with data on time use is that the time spent on the different activities can be above the maximum number of hours available during a week. This may be partly explained by the simultaneity of several activities (e.g. taking care of children and preparing food at the same time). In order to correct for the overestimation of time spent on these activities, we first consider a maximum time of 119 hours individuals can spend on their different activities during one week (this corresponds to 7 days of 17 hours of activities and 7 hours of sleep and leisure). When the total number of hours (labor and domestic hours) exceeds this maximum, we apply a correction factor to each number of hours associated with an activity, so that the total number of hours does not exceed 119 hours per week.[17] School enrollment is measured by a dummy variable equal to 1 if the child is enrolled in a French or Franco-Arab school.

3.3 Some descriptive statistics

Table 1 describes individuals' exposure to chronic illness shocks between the two interview rounds, affecting them or another baseline household member, by sex and age group. About one third of individuals have at least another baseline household member who experienced a chronic illness shock between the two rounds. Female members report more new chronic illness shocks (8.4% of women and 3.7% of girls) than male members (3.7% of men and 1.8% of boys).[18] Then, we use a more precise measure of the shock depending on the characteristics of the ill member. Individuals are more likely to have another female (23.1%) or an adult member (20.6%) than respectively a male member (14%) or a child (6%) getting a new chronic illness. Household members evenly face the illness of a worker or a non worker (17.5% versus 16.1%). 10.6% of individuals have their household head and 7% have their cell head who suffered from a new chronic illness. The last part of the table decompose the shock according to the specific tie to the ill member to further analyze the differentiated effects depending on whether the ill member is a close or a more distant relative.

Table 2 displays a set of baseline individual and household characteristics depending on whether another member of the baseline household has experienced a chronic illness shock

[17] We test the robustness of our results with and without applying the corrections.

[18] This result is common in the literature: women systematically report poorer health than men (Hosseinpoor et al., 2012). This gap could be explain by "true" health differences between men and women, by differences in health-reporting behavior or by social norms (Caroli and Weber-Baghdiguian, 2016).

between the two interview rounds. The analysis is split by sex and age group. These statistics show that while more than two third of adults male are working, this is the case only for half of the women. Women are mainly in charge of domestic work, performing more than 35 hours per week compared to about 8 hours for men. Whatever the sub-group considered, the individuals with and without another member affected by a chronic illness differ in terms of numerous characteristics. We find notably that adults with a baseline household member having experienced a chronic illness shock are younger, more educated, less often married, in larger households, and located in rural areas. Women and children with a baseline household member having experienced a chronic illness shock work significantly more in the baseline. Whatever the sub-group considered, we do not find a significant difference between the individuals compared in terms of their baseline chronic health status or in the existence of chronic illness in the the household before 2006. These initial differences must be kept in mind for our analysis to further assess the robustness of our identification strategy.

4 How do chronic illness shocks affect other household members' time allocation?

In this section, we investigate how a chronic illness affecting another member of the baseline household affects other household members' labor supply, school enrollment, and number of domestic hours. While estimating the causal effect of a chronic illness affecting a household member would ideally rely on an exogenous source of variation in chronic illness, we exploit the panel dimension of the data and its richness in terms of the information collected to control for a large number time-invariant and time-variant confounding factors.

4.1 The empirical model

To measure the effect of a chronic health shock affecting another baseline household member on individuals' work trajectory, we estimate the following equation as a linear probability model

with individual fixed effects[19] on the subsamples of adults and children, broken down by sex:

$$Y_{i,h,t} = \beta_1 C^k_{i,h,t} + \delta_i + \gamma_d \cdot \lambda r \cdot \theta_t + \omega_{m,t} + \varepsilon_{i,h,t} \quad (1)$$

where subscripts i, h, d, r, and t respectively denote individual, household, department[20], area of residence (a dummy equal to 1 if the household lives in a rural area and 0 otherwise), and survey rounds ($t = 0$ for the first round and $t = 1$ for the second one). $Y_{i,h,t}$ is a measure of the economic activity of individual i, in household h, at time t, which is a dummy equal to 1 if individual works at period t in our main specification. The same model is then estimated on other outcomes: $Y_{i,h,t}$ will then alternatively represent the number of weekly domestic hours performed and a dummy for school enrollment in the subsidiary analyses. C^k is the variable of interest: it is a dummy that equals 0 in $t = 0$ for all i and 1 in $t = 1$ if a member k of i's baseline household h has experienced a chronic illness shock between the two rounds of interview and 0 otherwise. The model also includes dummies for the month of interview, $\omega_{m,t}$, to take into account the seasonality of some economic activities. It also controls for specific trends by department and area of residence with interaction terms for the rural/urban area-department-time ($\gamma_d * \sigma_r * \theta_t$). The model also considers the varying effect of age by adding an interaction term between age and t. $\varepsilon_{i,h,t}$ is the error term. Standard errors are clustered at the household level because the shock is common to all members of the same baseline household. Therefore β_1 represents the effect of having a baseline household member who experienced a chronic illness on individuals who used to live together in 2006, whatever their cohabitation status in the follow-up survey.

This model is similar to a difference-in-differences model that compares mean changes in labor supply of "treated" individuals (with at least another household member with a health shock) and "non treated." It can be invalidated if, as suspected, the chronic health shock events are not exogenous, that is if households members with no shock are systematically different

[19]The Hausman test rejected the null hypothesis that there is no difference between the fixed effects and the random effects models. This suggests that individual effects are correlated with the probability that another member in the household has a chronic disease. We also reestimate the same equation using a conditional logit model with fixed effects. Although a logit model is more suited for the analysis of binary outcomes (for work and school enrollment), it relies on a smaller number of observations since it only estimates coefficients for individuals who experience transitions.

[20]33 departments are represented in our sample. Senegal consisted of 35 departments in 2006 and 45 since 2008.

from those who experienced a shock between the two rounds. The inclusion of individual fixed effects, δ_i, should however mitigate this issue by controlling for any time invariant observable and unobservable differences in characteristics that could be correlated with both the probability to experience a shock in the household and the work behavior. Notably, it aims at controlling for individual characteristics such as previous health status, past labor force status, living and working conditions, health preferences, social norms, or any sorting mechanisms leading individuals who share characteristics associated with a higher risk of chronic diseases or who adopt risky behaviors (diet, access to drinking water, smoking) or with similar work conditions that might damage their health (vendors close to major roads, miners, gold panners, etc.) to live together.

In a second specification, we further control for whether the individual herself has suffered from a chronic illness. Indeed, chronic illness shocks may correlated between individuals in the same household, if because of the above mentioned sorting mechanism, individuals are affected by similar shocks. In this case, the inclusion of a variable describing individual's own chronic illness (that also affects her own work trajectory) enables to isolate the pure effect of another household member's chronic illness shock. Controlling for individuals' own health shock also allow to control for differences in individuals' own capacity to respond to the shock by increasing their labor supply.

In a third specification, we include a set of other time-varying controls that may also have induced changes in individuals' labor supply in addition to chronic health shocks (own or of another household member). It includes negative shocks affecting the origin household between the two rounds (bad crops events, deaths), and changes at the individual level between the two rounds (variations in the household size, migration[21], and a new birth for female members only). Since some of these time-varying factors may be "bad controls" (because they may have been themselves affected by the shock), we provide estimations of β_1 with and without these controls.

As suggested earlier, a bias can arise from measurement errors on the chronic illness shock variable. Individual fixed effects should allow to correct for systematic measurement error in this measure, but there may still be a random measurement error. Section 5 discusses in more

[21]Since we are interested in a shock affecting a member of the origin household, i might have migrated within the two rounds. Note that we do not however consider health shocks of new household members who join the household between the two rounds.

details this issue, as well as the one related to a potential selection bias.[22]

4.2 Labor supply adjustments

4.2.1 Average effects

Table 3 reports the effects of a chronic illness shock affecting another baseline household members considering the three specifications described above. Results from the first specification show that a chronic illness increases the probability of working for men and boys respectively by 3.6 ppts and 5.2 ppts. The latter effect slightly increases in size when controlling for one's own chronic illness shock. For men, becoming chronically ill decreases by 9.9 ppts the probability of working. When controlling for other time-varying factors, the effects remains unchanged. Women and girls do not modify their labor supply in response to a chronic illness of another baseline household member and to their own chronic illness.[23]

4.2.2 Heterogeneous effects

Individual labor supply responses to health shocks may depend on the individual characteristics of the ill household member, notably on her gender, her age group, her work status in baseline and on her status in the household in baseline (whether she heads the household and/or one's cell or not). In particular, the probability to work is expected to be higher if the member who has become chronic ill was working in baseline (and before becoming ill). Indeed, in addition to the need to pay for medical expenditures household members may also have to compensate for earning losses if the ill member had to reduce her/his labor supply. Adjustments can also differ across the gender of the individual and of the ill member due to differentiated roles within the household. In case of rigid gender norms, only men are expected to respond to other men's and women's illness (and women are expected to respond only through adjustments of their domestic hours). The status of the ill member within the household may also matter, in particular if he/she is the household head or the household cell.

Our variables of interest now indicate if at least another women (respectively men, adult,

[22] Note that it is unlikely that the labor of one individual affects the probability that another member of her household has a chronic disease over the two time periods. Therefore, we have no reason to believe that our estimates suffer from a reverse causality issue.

[23] Our results hold when we estimate the same model with a conditional logit model specification (results not shown but available upon request).

child, worker, non worker) in the origin household suffered from a chronic disease between the two rounds in Table 4, and if the household head (respectively the cell head and another cell member) in the origin household suffered from a chronic disease between the two rounds in Table 5.[24] We find that women are more likely to work if a baseline household member who has become chronic ill was working in baseline. This effect is significantly different from the one of having a baseline household member who has become chronic ill and who was *not* working in baseline (tests of equality of coefficients are displayed at the bottom of the Table). Men increase their labor supply if the ill member was unemployed in baseline and also if she is a woman. Since women are less likely to work than men, these two effects might actually capture the same phenomenon: men adjust their labor supply to women's chronic illness.[25] Children increase their labor supply when an opposite sex household member has become chronic ill. The patterns suggested in Table 5 are consistent with those described in Table 4, given that women are less often the head of households.

Recall that since labor modules are not strictly comparable between the two rounds of the survey, our preferred measure of work status rely on the 2011 retrospective data. However, retrospective data can be prone to recall loss bias. For this reason, we run the same model on an alternative measure of work: we use the work status declared in both rounds, instead of the retrospective measure. Results are shown in Tables S2 and S3 in the Supplementary Materials. Compared with retrospective data, they confirm that women are responsive to a worker's illness, men to women's illness and girls to men's illness.

4.3 Domestic hours and school enrollment: substitution effects

Chronic illness shocks may modify how household members allocate their time between different tasks: labor, domestic work, and school for children. While some members may increase their labor supply as previously observed, others may have to increase their number of domestic hours to care for the ill member, or to substitute for the ill member or for the members who have started working. The risk of bearing a double burden of both working and performing domestic

[24] Only results from the second specification of Table 3 controlling for individuals' own chronic illness shock are presented. Results from the first and third specification lead to similar results and are available upon request.

[25] We also find that women's probability to work decreases if the baseline household member who has become chronic ill is a child. The need to care for the child (who cannot care for herself) may explain this finding. However, as indicated by the p-value, this effect is not statistically different from the adjustment induced by the chronic illness of an adult baseline household member.

chores may increase, especially for women. Children's schooling may also be affected through an income effect or through a substitution effect.

4.3.1 Domestic hours

Results relative to changes in domestic hours are shown in Table 6 (average effects), Table 7 (heterogeneity across gender, age, work status) and Table 8 (heterogeneity across status within the household). We find that women significantly increase their number of domestic hours by around 6 hours in case another baseline household member experiences a chronic illness shock, and especially if the latter is a woman. The number of hours of domestic work performed by men and children is rather insensitive to the chronic illness of another baseline household member, whatever the characteristics of the latter.[26] Besides, own chronic illness shock does not significantly affect the number of domestic hours performed.

These results are robust to the non-correction of domestic hours, although the effects are lower (see Tables S4, S5 and S6 in the Supplementary Materials). According to the 2006 data, about half of men did not perform any domestic hour (and when they do, they mainly declare home improvements and maintenance as domestic works). Only 10% of adult women declare zero domestic hours. Less than 40% of boys and about 60% of girls declare they do some domestic works. To take into account the non participation of some members in domestic works, we implement Honore (1992)'s estimator to estimate a censored regression model with fixed effects. Results hold and estimated effects are larger when accounting for the censoring at zero (see Tables S7 and S8 in the Supplementary Materials).

4.3.2 Children's school enrollment

No negative effect of chronic illness shocks on children's school enrollment is found, whatever the characteristics of the ill person (see Tables 9 and 10). On the contrary, girls seem to be more likely to be enrolled in school when a men falls chronic ill but this effect is not robust to alternative specifications presented in Section 5. Boys are more likely to enroll in school when the baseline household member falling chronic ill was working, but this effect is actually not significantly different from the adjustment induced by a non-worker illness. Surprisingly, child's

[26] Boys seem to increase their hours of domestic work when a female baseline household member falls chronic ill, but this effect is actually not significantly different from the adjustment induced by a male baseline household member falling chronic ill.

own chronic illness shock does not affect her school enrollment either.

Finally, note that all our results hold if we reduce the sample to individuals comparable in terms of household structure: to individuals with at least one other man and one other woman in their household for specifications studying heterogeneity across gender; to individuals with at least one other child and one other adult in their household for specifications studying heterogeneity across age groups; to individuals with at least one other member who did not work and one other member who worked in their household for specifications studying heterogeneity across baseline work status. Results are displayed in Tables S9, S10 and S11 in the Supplementary Materials.

4.3.3 Interpretation of results

All in all, adult men and women increase their labor supply when another baseline household member faces a chronic illness shock, but their response depends on the characteristic of the ill person. Only women increase their hours of domestic work. The norm according to which women – not men – should do the household chores does not seem to be challenged by the need to cope with a health shock. But the norm according to which men – not women – earn the income seems to adjust to the household needs. If men assume their role of providing financial support to ill women, women can bear this role if a worker gets ill to compensate for the earning loss.

As regards children, both boys and girls are more likely to work following the chronic illness of an opposite sex baseline household member. But this does not turn out to be detrimental to their school enrollment. Coping mechanisms are at least efficient to protect this outcome. The fact that the chronic illness of an *opposite sex* baseline household matters in explaining children's work trajectory raises the question of whether adult men and women have different preferences for the children they are in charge of: a chronic illness decreases one's bargaining power and the favored child could suffer from this by working more. For instance, Lambert and Rossi (2016) show that mothers have a preference for sons in Senegal. These results could as well reflect social norms. Like men, boys seem to have a greater responsibility for financial support towards women. This may be even more true for sons in response to their mother's illness

(Evans, 2010). Girls, like women, may work more in case of needs if less men are available to work in the household. A male's chronic disease is expected to generate a higher loss of earnings than women's disease because the latter tend to have a lower labor force participation. This may prompt girls to work more if the reserve army of male labor is reduced. An alternative explanation could have been that children are in charge of taking care of a same sex member, such that children of opposite sex have to work, but our results on domestic hours do not support this hypothesis.

5 Robustness analyses to selection into treatment and in attrition

Our estimation strategy so far enables to get rid of unobserved time-invariant individual characteristics correlated with the probability of having a member of her household experiencing a chronic health shock and our outcomes of interest. In this section, we further test the validity of our results. First, we address the issue of selection into "treatment" (being part of a household with an individual with a chronic health shock) may be correlated with characteristics that affect the dynamic of our outcomes. Second, we test how robust our estimates are to the correction of selection in attrition and missing values.

5.1 Selection issues

Our results rely on the strong identifying assumption that work trajectories of individuals who belong to households which did not experience a health shock are a good counterfactual. In particular, it states that individuals in households with a chronically ill and those who are not affected would not have followed parallel paths in work outcomes in the absence of such a shock. This assumption may fail in the presence of asymmetric shocks or pre-shock differences in labor paths across those two groups. A famous example of the violation of the parallel trend assumption is the "Ashenfelter's dip" that describes a drop in average outcomes before the treatment (Ashenfelter and Card, 1985). Individual transitory shocks on past outcomes will then induce non parallel outcomes dynamic. We adopt two strategies to address this issue.

5.1.1 Strategy 1: Interaction terms between baseline characteristics and time

We first add controls for baseline characteristics interacted with time to take into account the potential heterogeneity in the outcome dynamics. The covariates used for these estimations are the following: age, marital status, ethnic group, health status, number of female and male adult members, number of girls and boys in the household, log consumption per capita, area of residence, department of residence. Our previous results on labor supply and hours of domestic activities are robust with the inclusion of these covariates (see Tables 11 and 12). According to Table 13, the positive effect of a male member's illness on girls' school enrollment is no longer significant once controlling to the set of interactions between baseline characteristics and time.

5.1.2 Strategy 2: Semi-parametric difference-in-differences

In order to relax this strict parallel trend assumption, we further assess the robustness of our results by computing semi parametric difference-in-differences estimates as suggested by Abadie (2005). The underlying idea of this method is to reweigh observations to impose the same distribution of covariates for individuals whose a household member experienced a health shock and those who did not, in the line with propensity score matching methods (Rosenbaum and Rubin, 1983). This method relies then on a conditional common trend assumption, allowing for observed characteristics to differ in both groups (individuals in households with a health shock and those without). For adults, the baseline variables used are the following: age, dummies indicating whether the individual has ever been enrolled in a French school, whether he is currently enrolled in a French school, whether he was already ill chronically, whether another household member was already ill chronically, measures of household size, number of members working, number of workers not working, the average age of household members, indicators of the household position in distribution of consumption per capita (quartiles), whether the household is located in a rural area, whether the individual is married, indicators of ethnic groups. For children, variables used are are the same except we exclude indicators of school enrollment.

Table 14, 15, 16 display the average treatment effect obtained by the semi-parametric difference-in-differences estimators respectively for labor supply, domestic hours and school enrollment. The effects obtained by this alternative method on labor supply and domestic hours

are close to those previously found in Section 4. The absence of any effect of one's chronic illness on children's school enrollment is confirmed.

5.2 Attrition and Missing Value Issue

As mentioned in Section 3, around 16% of the initial sample of individuals could not be interviewed again despite the tracking of individuals for the second round. This non-negligible attrition may induce an attrition (selection) bias if the characteristics of the respondents who could not be found in the second round differ from those who were interviewed again. Notably, attrition will be correlated with illness shocks if some respondents were not contacted again because they were hospitalized for a long period of time. In this case, our results relative to the effect of one's own chronic illness would be biased. Our results relative to the effect of a chronic illness affecting a baseline household member would also be biased if some household members were less likely to be found because they were accompanying the ill household member where she get cured, or because they migrated and the members left behind (among them, the ill member) were less able to provide a precise address to ease the tracking. Besides, we also have missing values on the variables used for our analysis. This is particularly true for the baseline work status built from 2011 retrospective data on employment history at the corresponding date of interview in 2006 (8.8% of missing values for non-attritors).

One way to deal with this selection issue is to use Heckman (1979)'s correction method. In the first stage (the selection model), we regress a dummy variable indicating whether an individual was not interviewed again or whether she has missing values, on a vector of variables using a probit model. We use interviewer dummies as excluded instruments; we assume that interviewers' identity affects the probability of attrition or missingness, but not the outcomes conditional on selection. Table 17 (columns (2), (4), (6), and (8)) show that interviewer dummies are jointly significant and thus can be considered as valid instruments. Then, the predicted values from this model are used to compute the inverse Mills ratios (IMR) that will be used as an instrument for selection. In the second stage (the outcome model), the inverse Mills ratio is used as a predictor in the model. The results corrected for attrition and missing variables, are presented in Tables 18, 19 and 20. Attrition and missing variables lead to a slight underestimation of the effect of a chronic illness shock affecting another baseline household member.

The IMR correction terms are not significant for women and children in labor estimations and are never significant in the domestic hours analysis. This suggests that attrition bias may be small, or potentially correlated with the time-invariant characteristics that are controlled for. However, selection appears to be important for men as regards their work behavior and for children for the school enrollment. Corrected results nevertheless remain qualitatively similar to those corrected for selection when correcting for attrition. Men increase their labor supply in response to a female, adult, non worker chronic illness and there is no effect of chronic illness of children's enrollment.

6 Do Individual Responses Depend on the Link to the Ill Member? A Within-Household Analysis

6.1 Empirical Strategy

To answer this question, we estimate equation (1) with two modifications: (a) individual fixed effects are replaced by household ones; and (b) the dummy indicating whether a baseline household member has become chronically ill is replaced by a dummy indicating whether a member with a given tie has become chronically ill. We consider the following ties: the chronically ill member is a spouse, a mother, a father, a son, a daughter, a mother's co-wife (particularly relevant for children), a mother-in-law, or a father-in-law. Other ill members are grouped, depending on their gender, among the following: another female member, or another male member. So the sample is reduced to individuals with a baseline household member who has become ill according to our definition. Additionally, we only focus on non-ill members in order to compare the within-household work changes of members who have not undergone a similar shock themselves.

6.2 Results

The estimations of this model are presented in Table 21 for labor outcomes and in Table 22 for domestic hours. We find that, within a household, a woman is more likely to enter the labor market than other women when the ill member is her spouse or her children. Her probability

to work increases by more than 10 ppts compared to other women in the household. Mothers and spouses may adjust more their labor supply first due to the closer ties to their nuclear family, but also because they have more room to adjust their labor supply since they start from a relatively low level of participation. When the ill household member is a son, a mother decreases her hours of domestic work more (Table 22). This could be because she takes care of him (domestic hours do not comprise hours spent taking care of household members). A woman is however less likely to enter if the ill member is a distant, same-sex relative (the ill person is not a mother, a daughter, a mother-in-law, or a mother's co-wife, but she could be a sister, a cousin, a co-wife, a non-related woman, etc). This is consistent with the fact that she acts rather as a substitute at home to perform domestic duties instead of the ill female household members. Compared to other women in the household, women whose mother, mother's co-wife, or parents-in-law suffered from a health shock significantly increase their number of domestic hours. This is in line with the hypothesis that women are more likely to cope with the shock in the domestic sphere, especially if the ill member is a woman. All in all, women react differently depending on who has become ill and evidence is suggestive of shared responsibilities within the household.

As regards men, they are more likely to enter the labor market than other men in the same household when the ill member is a son, or another female household member (like a sister). The absence of reaction towards their wife may be explained by the fact that married men already have a high participation rate and adjustment in the form of more entries is therefore difficult for them.[27] Concerning children, boys are more likely to enter the labor market if the ill member is their mother. This is consistent with the responsibility of a son towards her mother in Senegal. Moreover, boys decrease their domestic hours if the ill person is their father, but we do not find evidence that they do this to replace their fathers on the labor market.

Children's education is positively affected when their mother's cowife has a chronic illness, by 14.9 ppts for girls and 16.2 ppts for boys (see Table 23). This may reflect a reduction in the bargaining power of the mother's co-wife in favor of their own mother that may be better able

[27]We do not include parents-in-law's health shocks for men since very few of them actually live with their parents-in-law in Senegal (marriage is essentially patrilocal). In column (2), parents-in-law's health shocks affect less than 1 % of our male sample and are thus included in the variables "other female member's" and "other male member's health shocks", respectively for mothers-in-law and fathers-in-law, in the regression.

to allocate husband's resources to their own children at the expense of the co-wife's children. Girl's probability of enrollment also increases by 12.9 ppts when her father gets ill. Father's disease may also improve the power of decision of his wife and may induce a reallocation of expenses towards their daughter's education.

7 Conclusions

In a context where the prevalence of chronic diseases is projected to increase over the coming years, this paper addresses the important question of how individuals adjust their work decisions in response to a chronic illness affecting one household member. It also raises subsidiary questions concerning the long run consequences of such a shock, either directly or indirectly through labor supply adjustments, on children's human capital accumulation and on women's physical and psychological status. Specifically, it asks whether the chronic illness of a household member negatively affects children's school enrollment and whether it increases the risk of a work overload for women, who already perform most of the domestic chores in Senegal. Having these objectives in mind, we use original individual panel data for Senegal to answer these questions.

We find that men and boys significantly increase their labor supply in response to another member's chronic illness, in particular if the ill member is a female. Girls are more likely to work if a male household member is chronically ill, and women if the member was working before the shock. The latter finding suggests that one important factor driving female's decision to enter the labor market is to compensate for an earning loss. Children's reaction to opposite sex members' illness may reflect differences in preferences for children depending on their gender. They may also be interpreted in the light of social norms regarding gender roles. Boys' reaction seems consistent with social norms dictating they have to provide financial support for women. However, these norms may be challenged when a chronic disease affect a male member. If the number of men able to work in the household is reduced, girls may in that case be put at work. Women also largely increase their hours spent on domestic activities, which can represent a risk of work overload. They may constitute a vulnerable group in this regard.

Senegal is characterized by a limited set of formal insurance tools available to households to address the negative consequences of a shock. Labor supply adjustments put forward in

our analysis suggest that households have to implement informal strategies to cope with the burden of a chronic illness. One important implication of these findings would be to orient health policies towards a reduction of the chronic disease burden for the households and take into account the risk of work overload for women.

Besides, children's school enrollment does not seem to be adversely affected. This result suggests that coping mechanisms implemented help to protect this outcome. An interesting avenue for further research would be to assess if their capacity of learning is however compromised.

De Weerdt and Fafchamps (2011) suggest that chronic illness, compared to non-chronic illnesses, should induce more labor supply adjustments. Indeed, a chronic disease compromises one's ability to reciprocate in the future which may reduce the incentives of network members to help. Although we do find significant labor supply adjustments, we did not test whether these adjustments occur because transfers from the kin group are more limited. Testing this hypothesis could be one direction for future research.

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Table 1: Chronic illness shocks occurrence between 2006 and 2011

	All		Female		Male		Girls		Boys	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Own	0.052	0.223	0.084	0.277	0.037	0.190	0.037	0.190	0.019	0.137
At least another member	0.310	0.462	0.291	0.454	0.314	0.464	0.335	0.472	0.324	0.468
Only one other shock	0.216	0.412	0.210	0.407	0.215	0.411	0.224	0.417	0.229	0.421
Several other shocks	0.093	0.291	0.082	0.274	0.099	0.298	0.111	0.314	0.095	0.293
At least another female member	0.231	0.422	0.206	0.404	0.244	0.429	0.247	0.432	0.253	0.435
At least another male member	0.140	0.347	0.142	0.349	0.132	0.338	0.161	0.367	0.135	0.342
At least another worker	0.175	0.380	0.168	0.374	0.175	0.380	0.195	0.397	0.173	0.378
At least another non worker	0.161	0.368	0.148	0.356	0.165	0.371	0.173	0.378	0.175	0.380
At least another child	0.060	0.237	0.063	0.243	0.055	0.228	0.063	0.242	0.058	0.234
At least another adult	0.206	0.405	0.197	0.398	0.206	0.404	0.220	0.414	0.217	0.412
At least another member of my cell	0.210	0.407	0.188	0.390	0.206	0.404	0.241	0.428	0.241	0.428
Household head	0.106	0.308	0.104	0.305	0.097	0.296	0.122	0.328	0.113	0.317
Cell head	0.070	0.255	0.043	0.202	0.069	0.254	0.100	0.300	0.111	0.314
Spouse	0.025	0.157	0.038	0.191	0.035	0.183	0.000	0.000	0.000	0.000
Cowife	0.007	0.082	0.018	0.132	0.000	0.000	0.000	0.000	0.000	0.000
Mother	0.061	0.240	0.037	0.190	0.066	0.248	0.085	0.279	0.089	0.285
Father	0.043	0.203	0.025	0.157	0.050	0.219	0.063	0.242	0.054	0.225
Daughter	0.015	0.122	0.027	0.161	0.016	0.126	0.000	0.000	0.000	0.000
Son	0.012	0.110	0.021	0.143	0.013	0.115	0.000	0.000	0.000	0.000
Mother's cowife	0.020	0.138	0.010	0.098	0.019	0.137	0.033	0.179	0.032	0.176
Mother in law	0.006	0.074	0.014	0.116	0.001	0.036	0.000	0.000	0.000	0.000
Father-in-law	0.002	0.048	0.005	0.068	0.002	0.042	0.000	0.000	0.000	0.000
Other female member (other link)	0.176	0.381	0.199	0.400	0.141	0.348	0.196	0.397	0.169	0.375
Other male member (other link)	0.092	0.289	0.067	0.251	0.110	0.313	0.107	0.309	0.102	0.303
Observations	7363		2809		2303		1152		1099	

"Mean" represents the mean of the variable and "Std. Dev." the standard deviation. Shocks concern co-residing household members in 2006. "Other female/male member" relates to other members of the household, such as brothers and sisters, grandparents, cousins, domestic servants, etc.
Women and men are aged between 15 and 58 in 2006, girls and boys are aged between 6 and 14 in 2006.
Source: PSF surveys, 2006-2011. Authors' calculation.

Table 2: Baseline characteristics of household members depending on the occurrence of a chronic health shock in the household (2006)

	At least another health shock			
	No	Yes	Difference (No) - (Yes)	
	Mean	Mean	Mean	P-value
Women (15-58)				
Age	31.59	29.84	1.75***	3.50
Ever been enrolled in French school	0.40	0.45	-0.05**	-2.41
Ever been enrolled in Koranic school	0.13	0.16	-0.03*	-1.94
Married	0.64	0.60	0.04**	2.03
Work	0.45	0.51	-0.05**	-2.53
Chronically ill	0.07	0.08	-0.01	-0.57
Past illness shock in the household	0.05	0.06	-0.01	-1.45
Domestic hours	38.45	34.85	3.60**	2.50
Female household head	0.25	0.22	0.03*	1.96
Household size	10.34	13.59	-3.25***	-10.90
Number of female members	5.66	7.62	-1.95***	-11.21
Number of male members	4.68	5.97	-1.30***	-8.33
Number of children under 6	1.87	2.43	-0.56***	-6.58
Average age of household members	23.58	23.15	0.43*	1.74
Log consumption	12.46	12.37	0.09**	2.33
Rural	0.49	0.45	0.04**	2.05
Household head network	7.15	6.72	0.43*	1.93
Observations	2809			
Men (15-58)				
Age	31.26	29.29	1.98***	3.64
Ever been enrolled in French school	0.55	0.60	-0.05**	-2.43
Ever been enrolled in Koranic school	0.23	0.23	-0.00	-0.18
Married	0.46	0.37	0.09***	4.03
Work	0.76	0.75	0.01	0.66
Chronically ill	0.06	0.05	0.01	0.73
Past illness shock in the household	0.06	0.06	-0.01	-0.50
Domestic hours	7.51	8.66	-1.15	-1.51
Female household head	0.15	0.21	-0.05**	-2.96
Household size	10.35	13.54	-3.19***	-9.85
Number of female members	4.97	6.69	-1.73***	-9.25
Number of male members	5.39	6.85	-1.47***	-8.70
Number of children under 6	1.80	2.23	-0.43***	-4.99
Average age of household members	24.15	23.53	0.62**	2.26
Log consumption	12.46	12.38	0.08**	2.03
Rural	0.45	0.38	0.07***	3.36
Household head network	7.40	7.23	0.17	0.70
Observations	2303			
Girls (6-14)				
Age	9.72	10.02	-0.31*	-1.93
Ever been enrolled in French school	0.67	0.68	-0.00	-0.13
Currently enrolled in French school	0.60	0.59	0.01	0.45
Ever been enrolled in Koranic school	0.11	0.12	-0.01	-0.54
Married	0.00	0.00	0.00	0.01
Work	0.08	0.18	-0.10***	-4.67

Table 2: Baseline characteristics of household members depending on the occurrence of a chronic health shock in the household (2006) (continued)

	At least another health shock			
	No	Yes	Difference (No) - (Yes)	
	Mean	Mean	Mean	P-value
Chronically ill	0.02	0.03	-0.01	-1.19
Past illness shock in the household	0.06	0.06	-0.00	-0.23
Domestic hours	7.93	8.81	-0.88	-0.88
Female household head	0.20	0.17	0.03	1.31
Household size	10.89	14.39	-3.50***	-7.71
Number of female members	6.28	8.26	-1.98***	-7.60
Number of male members	4.61	6.13	-1.52***	-6.40
Number of children under 6	1.97	2.59	-0.62***	-4.80
Average age of household members	21.13	21.26	-0.13	-0.41
Log consumption	12.30	12.22	0.08	1.46
Rural	0.57	0.56	0.01	0.18
Household head network	7.19	6.28	0.91**	3.02
Observations	1152			
Boys (6-14)				
Age	9.89	10.00	-0.11	-0.66
Ever been enrolled in French school	0.69	0.62	0.06**	2.08
Currently enrolled in French school	0.64	0.56	0.07**	2.32
Ever been enrolled in Koranic school	0.12	0.16	-0.04*	-1.78
Married	0.00	0.00	0.00	.
Work	0.20	0.27	-0.06**	-2.29
Chronically ill	0.02	0.02	0.00	0.04
Past illness shock in the household	0.07	0.06	0.01	0.58
Domestic hours	4.01	5.27	-1.26	-1.55
Female household head	0.17	0.17	0.01	0.27
Household size	11.18	14.07	-2.90***	-5.92
Number of female members	5.28	7.07	-1.79***	-6.05
Number of male members	5.90	7.01	-1.11***	-4.59
Number of children under 6	1.96	2.44	-0.48***	-3.62
Average age of household members	21.24	21.86	-0.62*	-1.89
Log consumption	12.25	12.15	0.10*	1.88
Rural	0.57	0.52	0.05*	1.67
Household head network	6.99	6.54	0.45	1.35
Observations	1099			

Source: PSF surveys, 2006-2011. Authors' calculation.
Significance levels derived from a unequal variance t test between variables in columns (1) and (2) : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 3: Effect of a health shock on household members' labor supply - Linear probability model with individual fixed effects

	Female			Male			Girls			Boys		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
At least another shock	0.008	0.009	0.007	0.035*	0.037**	0.035*	0.018	0.018	0.018	0.052*	0.054*	0.055**
	(0.018)	(0.019)	(0.019)	(0.018)	(0.018)	(0.018)	(0.025)	(0.025)	(0.025)	(0.028)	(0.028)	(0.028)
Own health shock		-0.020	-0.021		-0.099**	-0.097**		-0.084	-0.084		-0.078	-0.086
		(0.033)	(0.032)		(0.043)	(0.043)		(0.066)	(0.065)		(0.090)	(0.089)
Bad harvest			-0.053**			-0.050**			-0.029			0.046
			(0.023)			(0.022)			(0.038)			(0.045)
Death			0.017			0.060*			-0.004			0.040
			(0.047)			(0.036)			(0.051)			(0.058)
Migration			-0.010			0.018			-0.020			-0.016
			(0.020)			(0.024)			(0.032)			(0.035)
Household size			-0.002			-0.004**			0.001			-0.002
			(0.001)			(0.002)			(0.002)			(0.003)
New born child			-0.032*						-0.047			
			(0.017)						(0.069)			
Age	-0.003***	-0.002***	-0.003***	-0.005***	-0.005***	-0.005***	0.007	0.007	0.008*	-0.003	-0.003	-0.002
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.004)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)
Constant	0.476***	0.476***	0.499***	0.751***	0.750***	0.788***	0.110***	0.110***	0.099***	0.202***	0.201***	0.234***
	(0.013)	(0.013)	(0.021)	(0.012)	(0.012)	(0.023)	(0.015)	(0.015)	(0.032)	(0.017)	(0.017)	(0.036)
Department × rural × time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5618	5618	5618	4606	4606	4606	2304	2304	2304	2198	2198	2198
Individuals	2809	2809	2809	2303	2303	2303	1152	1152	1152	1099	1099	1099
R-squared	0.076	0.076	0.080	0.105	0.107	0.113	0.231	0.233	0.235	0.264	0.265	0.267

Source: PSF surveys 2006-2011. Sample is composed of 6-58 years old individuals. Dependent variable is a dummy equal to 1 if individual i worked at period t.
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 4: Effect of a health shock on household members' labor supply depending on the gender, age and labor status of the ill member - Linear probability model with individual fixed effects

	Female			Male			Girls			Boys		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Male	0.016			-0.027			0.078**			-0.045		
	(0.023)			(0.026)			(0.035)			(0.037)		
Female	0.016			0.058***			-0.030			0.084***		
	(0.021)			(0.021)			(0.027)			(0.032)		
Child		-0.059**			-0.034			0.026			-0.011	
		(0.027)			(0.027)			(0.054)			(0.049)	
Adult		-0.014			0.046**			0.020			0.094***	
		(0.020)			(0.022)			(0.029)			(0.032)	
Worker			0.062***			-0.030			0.004			0.025
			(0.023)			(0.023)			(0.032)			(0.037)
Not a worker			-0.033			0.086***			0.004			0.032
			(0.023)			(0.023)			(0.031)			(0.035)
Own health shock	-0.022	-0.020	-0.019	-0.102**	-0.097**	-0.102**	-0.096	-0.084	-0.085	-0.077	-0.061	-0.079
	(0.033)	(0.033)	(0.033)	(0.043)	(0.043)	(0.044)	(0.066)	(0.065)	(0.066)	(0.091)	(0.090)	(0.090)
Age	-0.002***	-0.003***	-0.002***	-0.005***	-0.005***	-0.005***	0.007	0.007*	0.007*	-0.003	-0.003	-0.003
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.004)	(0.004)	(0.004)	(0.005)	(0.005)	(0.005)
Constant	0.476***	0.477***	0.477***	0.750***	0.750***	0.749***	0.111***	0.109***	0.111***	0.201***	0.200***	0.202***
	(0.013)	(0.013)	(0.013)	(0.012)	(0.012)	(0.011)	(0.015)	(0.016)	(0.016)	(0.017)	(0.017)	(0.018)
Department × rural × time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5618	5618	5618	4606	4606	4606	2304	2304	2304	2198	2198	2198
Individuals	2809	2809	2809	2303	2303	2303	1152	1152	1152	1099	1099	1099
R-squared	0.077	0.078	0.079	0.109	0.108	0.112	0.238	0.233	0.233	0.268	0.269	0.263
Tests of equality of coefficients (p-values)												
Women / Men	0.997			0.021			0.023			0.018		
Child / Adult		0.196			0.025			0.930			0.071	
Worker /Non Worker			0.004			0.001			0.988			0.903

Source: PSF surveys 2006-2011. Sample is composed of 6-58 years old individuals. Dependent variable is a dummy equal to 1 if individual i worked at period t.
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 5: Effect of a health shock on household members' labor supply depending on the position within the household - Linear probability model with individual fixed effects

	Female			Male			Girls			Boys		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Household head	0.032			0.013			-0.004			-0.023		
	(0.029)			(0.035)			(0.034)			(0.037)		
Non household head	0.005			0.037*			0.020			0.060*		
	(0.019)			(0.020)			(0.029)			(0.032)		
Cell head		0.002			0.061			-0.005			0.071	
		(0.051)			(0.043)			(0.036)			(0.045)	
Non cell head		0.013			0.019			0.024			0.021	
		(0.019)			(0.019)			(0.026)			(0.030)	
Member of the same cell			0.008			0.035			-0.044			0.035
			(0.030)			(0.029)			(0.029)			(0.037)
Member of another cell			0.001			0.022			0.047*			0.025
			(0.021)			(0.020)			(0.028)			(0.033)
Own health shock	-0.021	-0.021	-0.020	-0.098**	-0.095**	-0.096**	-0.084	-0.087	-0.079	-0.079	-0.083	-0.077
	(0.033)	(0.033)	(0.033)	(0.043)	(0.043)	(0.043)	(0.066)	(0.066)	(0.066)	(0.092)	(0.089)	(0.090)
Age	-0.002***	-0.002***	-0.002***	-0.005***	-0.005***	-0.005***	0.007*	0.007	0.007*	-0.003	-0.003	-0.003
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.004)	(0.004)	(0.004)	(0.005)	(0.005)	(0.005)
Constant	0.477***	0.476***	0.476***	0.751***	0.751***	0.751***	0.110***	0.111***	0.111***	0.201***	0.202***	0.202***
	(0.013)	(0.013)	(0.013)	(0.012)	(0.012)	(0.012)	(0.015)	(0.015)	(0.015)	(0.017)	(0.017)	(0.017)
Department × rural × time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5618	5618	5618	4606	4606	4606	2304	2304	2304	2198	2198	2198
Individuals	2809	2809	2809	2303	2303	2303	1152	1152	1152	1099	1099	1099
R-squared	0.077	0.076	0.076	0.107	0.107	0.107	0.233	0.233	0.236	0.265	0.265	0.263
Tests of equality of coefficients (p-values)												
Household head / Non household head	0.434			0.588			0.629			0.138		
Cell head / Non cell head		0.826			0.394			0.519			0.377	
In the cell/ Not in the cell			0.838			0.712			0.025			0.849

Source: PSF surveys 2006-2011. Sample is composed of 6-58 years old individuals. Dependent variable is a dummy equal to 1 if individual i worked at period t.
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 6: Effect of a health shock on household members' domestic hours - OLS model with individual fixed effects

	Female			Male			Girls			Boys		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
At least another shock	5.968***	6.041***	5.840***	-1.138	-1.167	-1.171	-0.059	-0.064	0.080	1.593*	1.499	1.427
	(1.855)	(1.858)	(1.810)	(0.967)	(0.969)	(0.980)	(1.544)	(1.546)	(1.435)	(0.902)	(0.913)	(0.910)
Own health shock		-1.812	-2.068		1.367	1.391		7.196	7.643		3.387	3.799
		(2.766)	(2.705)		(1.893)	(1.901)		(4.932)	(4.749)		(2.202)	(2.320)
Bad harvest			0.781			-0.780			2.688			-4.750***
			(2.838)			(1.833)			(2.467)			(1.517)
Death			-0.980			-0.087			2.597			-0.300
			(4.084)			(2.166)			(2.371)			(1.096)
Migration			6.250***			0.476			2.760			-1.292
			(1.926)			(0.856)			(1.775)			(1.046)
Household size			-0.454***			-0.017			-0.462***			-0.013
			(0.158)			(0.069)			(0.110)			(0.072)
New born child			13.311***						34.234***			
			(1.740)						(5.284)			
Age	-0.439***	-0.433***	-0.239***	0.029	0.026	0.028	1.309***	1.261***	0.665**	-0.522***	-0.527***	-0.556***
	(0.058)	(0.059)	(0.060)	(0.027)	(0.027)	(0.027)	(0.286)	(0.287)	(0.263)	(0.141)	(0.141)	(0.143)
Constant	37.898***	37.920***	43.047***	8.761***	8.764***	8.933***	9.278***	9.267***	14.419***	4.674***	4.682***	4.503***
	(1.248)	(1.248)	(2.148)	(0.475)	(0.475)	(0.930)	(1.026)	(1.026)	(1.639)	(0.540)	(0.541)	(0.983)
Department × rural × time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5618	5618	5618	4606	4606	4606	2304	2304	2304	2198	2198	2198
Individuals	2809	2809	2809	2303	2303	2303	1152	1152	1152	1099	1099	1099
R-squared	0.105	0.105	0.135	0.119	0.119	0.120	0.188	0.191	0.281	0.112	0.114	0.127

Source: PSF surveys 2006-2011. Sample is composed of 6-58 years old individuals. Dependent variable is the number of weekly domestic hours performed at period t.
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 7: Effect of a health shock on household members' domestic hours depending on the gender, age and labor status of the ill member - Linear probability model with individual fixed effects

	Female			Male			Girls			Boys		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Male	-0.091			-0.793			1.906			-0.048		
	(2.354)			(1.351)			(1.926)			(1.295)		
Female	6.352***			-1.029			-0.872			2.123**		
	(2.138)			(0.998)			(1.792)			(1.006)		
Child		1.391			-1.278			-1.884			1.252	
		(3.257)			(1.629)			(3.312)			(1.494)	
Adult		7.315***			-0.997			-0.206			1.436	
		(2.107)			(1.098)			(1.664)			(1.002)	
Worker			2.536			-0.187			2.399			1.538
			(2.208)			(1.163)			(1.894)			(1.189)
Not a worker			4.578**			-1.216			-1.722			1.568
			(2.324)			(1.093)			(1.940)			(1.074)
Own health shock	-1.600	-1.652	-1.708	1.342	1.344	1.353	6.901	7.144	7.157	3.252	3.725*	2.889
	(2.786)	(2.770)	(2.765)	(1.906)	(1.882)	(1.905)	(4.937)	(4.913)	(4.977)	(2.129)	(2.168)	(2.217)
Age	-0.431***	-0.433***	-0.440***	0.026	0.027	0.028	1.250***	1.252***	1.250***	-0.526***	-0.527***	-0.528***
	(0.059)	(0.059)	(0.059)	(0.027)	(0.027)	(0.027)	(0.286)	(0.286)	(0.286)	(0.141)	(0.143)	(0.142)
Constant	37.969***	37.775***	37.922***	8.745***	8.772***	8.769***	9.283***	9.295***	9.363***	4.692***	4.659***	4.703***
	(1.248)	(1.243)	(1.254)	(0.471)	(0.475)	(0.471)	(1.024)	(1.023)	(1.015)	(0.543)	(0.538)	(0.548)
Department × rural × time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5618	5618	5618	4606	4606	4606	2304	2304	2304	2198	2198	2198
Individuals	2809	2809	2809	2303	2303	2303	1152	1152	1152	1099	1099	1099
R-squared	0.105	0.106	0.104	0.119	0.119	0.119	0.192	0.191	0.193	0.115	0.113	0.115
Tests of equality of coefficients (p-values)												
Women / Men	0.063			0.899			0.314			0.243		
Child / Adult		0.141			0.890			0.665			0.921	
Worker / Non Worker			0.560			0.550			0.154			0.986

Source: PSF surveys 2006-2011. Sample is composed of 6-58 years old individuals. Dependent variable the number of weekly domestic hours performed at period t.
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 8: Effect of a health shock on household members' domestic hours depending on the position within the household - Linear probability model with individual fixed effects

	Female			Male			Girls			Boys		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Household head	5.230*			-0.001			0.723			0.373		
	(2.744)			(1.556)			(2.246)			(1.300)		
Non household head	3.661*			-0.874			-0.359			1.532		
	(2.014)			(0.949)			(1.674)			(0.974)		
Cell head		6.646*			-0.157			1.415			1.054	
		(3.699)			(1.217)			(2.658)			(1.330)	
Non cell head		5.570***			-1.320			0.045			1.589	
		(1.910)			(1.005)			(1.621)			(0.983)	
Member of the same cell			-0.431			0.470			0.903			1.631
			(2.276)			(1.085)			(2.025)			(1.163)
Member of another cell			8.211***			-1.481			0.658			1.054
			(2.051)			(1.087)			(1.680)			(1.089)
Own health shock	-1.665	-1.745	-1.544	1.328	1.414	1.378	7.172	7.273	7.100	3.322	3.150	3.149
	(2.760)	(2.760)	(2.802)	(1.912)	(1.900)	(1.886)	(4.929)	(4.952)	(4.978)	(2.217)	(2.234)	(2.299)
Age	-0.435***	-0.424***	-0.445***	0.029	0.027	0.031	1.256***	1.252***	1.249***	-0.527***	-0.526***	-0.524***
	(0.059)	(0.060)	(0.059)	(0.027)	(0.027)	(0.027)	(0.286)	(0.287)	(0.287)	(0.141)	(0.141)	(0.141)
Constant	37.981***	37.921***	37.894***	8.740***	8.749***	8.737***	9.290***	9.262***	9.259***	4.685***	4.685***	4.705***
	(1.255)	(1.250)	(1.251)	(0.472)	(0.473)	(0.472)	(1.024)	(1.024)	(1.025)	(0.546)	(0.541)	(0.543)
Department × rural × time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5618	5618	5618	4606	4606	4606	2304	2304	2304	2198	2198	2198
Individuals	2809	2809	2809	2303	2303	2303	1152	1152	1152	1099	1099	1099
R-squared	0.104	0.106	0.107	0.119	0.120	0.120	0.191	0.191	0.191	0.114	0.114	0.114
Tests of equality of coefficients (p-values)												
Household head / Non household head	0.668			0.642			0.703			0.494		
Cell head / Non cell head		0.800			0.473			0.671			0.743	
In the cell/ Not in the cell			0.005			0.197			0.926			0.695

Source: PSF surveys 2006-2011. Sample is composed of 6-58 years old individuals. Dependent variable the number of weekly domestic hours performed at period t.
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 9: Effect of a health shock on children's school enrollment - OLS model with individual fixed effects

	Girls						Boys					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
At least another shock	0.025	0.025	0.025				0.034	0.037	0.039			
	(0.033)	(0.033)	(0.033)				(0.034)	(0.034)	(0.033)			
Male				0.087**						0.017		
				(0.044)						(0.041)		
Female				-0.014						0.058		
				(0.036)						(0.036)		
Child					-0.030						0.014	
					(0.054)						(0.073)	
Adult					-0.008						0.019	
					(0.038)						(0.034)	
Worker						0.006						0.072*
						(0.039)						(0.038)
Not a worker						0.052						0.024
						(0.042)						(0.041)
Bad harvest			-0.045						0.053			
			(0.045)						(0.050)			
Death			0.053						0.170**			
			(0.073)						(0.078)			
Migration			-0.026						0.022			
			(0.041)						(0.047)			
Household size			-0.005*						0.006*			
			(0.003)						(0.003)			
New born child			-0.097									
			(0.073)									
Own health shock		-0.033	-0.033	-0.046	-0.034	-0.037		-0.110	-0.094	-0.118	-0.100	-0.127
		(0.068)	(0.070)	(0.068)	(0.068)	(0.069)		(0.082)	(0.082)	(0.082)	(0.084)	(0.083)
Age	-0.046***	-0.046***	-0.044***	-0.046***	-0.046***	-0.046***	-0.054***	-0.054***	-0.054***	-0.054***	-0.054***	-0.054***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Constant	0.584***	0.584***	0.646***	0.585***	0.585***	0.583***	0.620***	0.620***	0.551***	0.620***	0.620***	0.622***
	(0.020)	(0.020)	(0.042)	(0.021)	(0.020)	(0.021)	(0.024)	(0.024)	(0.047)	(0.024)	(0.024)	(0.024)
Department × rural × time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2304	2304	2304	2304	2304	2304	2198	2198	2198	2198	2198	2198
Individuals	1152	1152	1152	1152	1152	1152	1099	1099	1099	1099	1099	1099
R-squared	0.120	0.120	0.126	0.123	0.120	0.121	0.147	0.147	0.157	0.149	0.147	0.149
Tests of equality of coefficients (p-values)												
Women / Men				0.117						0.466		
Child / Adult					0.753						0.951	
Worker / Non Worker						0.436						0.363

Source: PSF surveys 2006-2011. Sample is composed of 6-14 years old individuals. Dependent variable is a dummy equal to 1 if the child is enrolled in French/ French-Arabic school at period t.
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 10: Effect of a health shock on children's school enrollment depending on the position within the household - Linear probability model with individual fixed effects

	Girls			Boys		
	(1)	(2)	(3)	(4)	(5)	(6)
Household head	0.012			0.069		
	(0.041)			(0.045)		
Non household head	0.036			0.029		
	(0.038)			(0.036)		
Cell head		0.003			0.049	
		(0.046)			(0.044)	
Non cell head		0.038			0.032	
		(0.035)			(0.037)	
Member of the same cell			0.050			0.043
			(0.037)			(0.040)
Member of another cell			0.024			0.052
			(0.038)			(0.040)
Own health shock	-0.033	-0.036	-0.038	-0.113	-0.118	-0.120
	(0.069)	(0.068)	(0.068)	(0.080)	(0.083)	(0.083)
Age	-0.046***	-0.046***	-0.046***	-0.054***	-0.054***	-0.054***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Constant	0.584***	0.584***	0.584***	0.621***	0.620***	0.621***
	(0.021)	(0.021)	(0.020)	(0.024)	(0.024)	(0.024)
Department × rural × time	Yes	Yes	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2304	2304	2304	2198	2198	2198
Individuals	1152	1152	1152	1099	1099	1099
R-squared	0.121	0.121	0.122	0.149	0.148	0.149
Tests of equality of coefficients (p-values)						
Household head / Non household head	0.693			0.473		
Cell head / Non cell head		0.578			0.753	
In the cell/ Not in the cell			0.645			0.872

Source: PSF surveys 2006-2011. Sample is composed of 6-14 years old individuals. Dependent variable is a dummy equal to 1 if the child is enrolled in French/ French-Arabic school at period t.
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 11: Effect of a health shock on household members' labor supply - Linear probability model with individual fixed effects and specific trends

	Female			Male			Girls			Boys		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Male	0.014			-0.026			0.081**			-0.027		
	(0.023)			(0.025)			(0.036)			(0.039)		
Female	0.018			0.054**			-0.024			0.084***		
	(0.021)			(0.022)			(0.026)			(0.031)		
Child		-0.059**			-0.035			0.025			0.001	
		(0.028)			(0.028)			(0.050)			(0.050)	
Adult		-0.016			0.050**			0.033			0.093***	
		(0.021)			(0.022)			(0.029)			(0.032)	
Worker			0.064***			-0.033			0.009			0.038
			(0.024)			(0.023)			(0.032)			(0.038)
Not a worker			-0.035			0.090***			0.007			0.039
			(0.024)			(0.025)			(0.031)			(0.035)
t*Age	-0.003***	-0.003***	-0.003***	-0.004***	-0.003***	-0.003***	0.009**	0.011**	0.010**	-0.002	-0.002	-0.002
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.004)	(0.004)	(0.004)	(0.005)	(0.005)	(0.005)
t*Second quartile of consumption (Ref. First)	-0.016	-0.014	-0.016	-0.044*	-0.040*	-0.041*	0.011	0.010	0.011	-0.037	-0.032	-0.038
	(0.021)	(0.022)	(0.022)	(0.023)	(0.023)	(0.023)	(0.033)	(0.032)	(0.032)	(0.041)	(0.041)	(0.042)
t*Third quartile of consumption	-0.009	-0.007	-0.009	-0.046*	-0.041*	-0.045*	0.015	0.014	0.013	-0.053	-0.048	-0.058
	(0.024)	(0.023)	(0.023)	(0.024)	(0.024)	(0.024)	(0.036)	(0.036)	(0.036)	(0.046)	(0.045)	(0.046)
t*Last quartile of consumption	0.005	0.006	0.005	-0.018	-0.018	-0.017	-0.026	-0.029	-0.029	-0.020	-0.017	-0.022
	(0.025)	(0.025)	(0.025)	(0.030)	(0.030)	(0.030)	(0.036)	(0.036)	(0.036)	(0.049)	(0.049)	(0.050)
t*Household size	0.001	0.002	0.002	0.005	0.006*	0.005	0.006	0.007	0.007	-0.002	-0.002	-0.003
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.005)	(0.005)	(0.006)
t*Number working members	-0.003	-0.003	-0.004	-0.008	-0.010*	-0.008	-0.005	-0.006	-0.005	0.003	0.002	0.002
	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.005)	(0.007)	(0.007)	(0.007)	(0.008)	(0.007)	(0.008)
t*Number non working members	0.001	0.001	0.001	-0.005	-0.007	-0.006	-0.017**	-0.017***	-0.016**	-0.000	-0.001	-0.000
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.007)	(0.007)	(0.006)	(0.007)	(0.008)	(0.008)
t*Previously chronically ill	-0.032	-0.031	-0.031	-0.051	-0.052	-0.057*	-0.159***	-0.162***	-0.156***	-0.064	-0.070	-0.071
	(0.029)	(0.029)	(0.029)	(0.033)	(0.032)	(0.032)	(0.053)	(0.057)	(0.056)	(0.078)	(0.079)	(0.078)
t*Previous health shock in the household	-0.003	-0.002	-0.002	0.005	0.010	0.005	-0.002	0.002	0.001	-0.030	-0.028	-0.033
	(0.016)	(0.016)	(0.016)	(0.018)	(0.018)	(0.017)	(0.022)	(0.021)	(0.022)	(0.027)	(0.027)	(0.027)
t*Serere (Ref. Wolof/Leebu)	0.026	0.023	0.020	-0.041	-0.046*	-0.039	-0.021	-0.023	-0.023	-0.029	-0.020	-0.026
	(0.026)	(0.026)	(0.026)	(0.028)	(0.028)	(0.027)	(0.042)	(0.042)	(0.042)	(0.049)	(0.049)	(0.049)
t*Poular	0.011	0.010	0.012	-0.034	-0.037	-0.038	-0.035	-0.039	-0.040	-0.008	-0.013	-0.013
	(0.023)	(0.023)	(0.024)	(0.024)	(0.024)	(0.024)	(0.033)	(0.033)	(0.034)	(0.038)	(0.037)	(0.038)
t*Diola	0.053	0.048	0.051	0.045	0.047	0.055	-0.020	-0.023	-0.027	-0.076	-0.076	-0.088
	(0.052)	(0.052)	(0.052)	(0.047)	(0.047)	(0.045)	(0.057)	(0.054)	(0.056)	(0.078)	(0.077)	(0.079)
t*Other	0.026	0.023	0.024	-0.029	-0.031	-0.029	-0.050	-0.058	-0.056	-0.054	-0.064	-0.059
	(0.029)	(0.029)	(0.029)	(0.027)	(0.026)	(0.026)	(0.040)	(0.040)	(0.040)	(0.042)	(0.042)	(0.042)
t*Married	0.018	0.017	0.019	-0.051**	-0.051**	-0.051**						
	(0.019)	(0.019)	(0.019)	(0.021)	(0.021)	(0.021)						
Own health shock		-0.017	-0.017		-0.096**	-0.100**		-0.093	-0.095		-0.069	-0.092
		(0.033)	(0.033)		(0.044)	(0.044)		(0.067)	(0.068)		(0.091)	(0.091)
Constant	0.478***	0.479***	0.479***	0.749***	0.748***	0.747***	0.106***	0.104***	0.105***	0.196***	0.194***	0.196***
	(0.013)	(0.013)	(0.013)	(0.012)	(0.012)	(0.012)	(0.015)	(0.015)	(0.015)	(0.019)	(0.019)	(0.019)
Department × rural × time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5618	5618	5618	4606	4606	4606	2304	2304	2304	2198	2198	2198
Individuals	2809	2809	2809	2303	2303	2303	1152	1152	1152	1099	1099	1099
R-squared	0.079	0.080	0.082	0.115	0.117	0.121	0.249	0.247	0.246	0.272	0.273	0.269
Tests of equality of coefficients (p-values)												
Women / Men	0.909			0.031			0.027			0.041		
Child / Adult		0.226			0.020			0.899			0.116	
Worker / Non Worker			0.003			0.001			0.960			0.977

Source: PSF surveys 2006-2011. Sample is composed of 6-58 years old individuals. Dependent variable is a dummy equal to 1 if individual i worked at period t.
Time varying controls are : bad harvest, death events, migration, new born child.
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 12: Effect of a health shock on household members' domestic hours - Linear probability model with individual fixed effects and baseline covariates

	Female			Male			Girls			Boys		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Male	-1.186			-0.399			2.661			-0.043		
	(2.414)			(1.278)			(1.984)			(1.416)		
Female	5.545**			-0.767			-0.670			2.212**		
	(2.172)			(1.002)			(1.863)			(0.990)		
Child		1.353			-1.571			-2.414			0.984	
		(3.348)			(1.650)			(3.397)			(1.578)	
Adult		6.669***			-0.772			-0.138			1.402	
		(2.101)			(1.003)			(1.763)			(1.001)	
Worker			1.771			0.373			2.565			1.785
			(2.237)			(1.082)			(1.974)			(1.247)
Not a worker			3.673			-1.219			-1.160			1.179
			(2.387)			(1.082)			(1.988)			(1.095)
t*Age	-0.389***	-0.385***	-0.393***	0.100***	0.097**	0.099**	1.278***	1.229***	1.234***	-0.470***	-0.480***	-0.476***
	(0.064)	(0.064)	(0.064)	(0.038)	(0.039)	(0.038)	(0.303)	(0.303)	(0.304)	(0.145)	(0.147)	(0.145)
t*Second quartile of consumption (Ref. First)	-0.087	0.430	0.230	-0.001	0.036	-0.030	0.695	0.560	0.417	0.589	0.682	0.561
	(2.833)	(2.820)	(2.825)	(1.548)	(1.550)	(1.544)	(2.189)	(2.202)	(2.204)	(1.614)	(1.604)	(1.638)
t*Third quartile of consumption	-2.873	-2.447	-2.585	0.779	0.792	0.776	-2.081	-2.274	-2.312	0.932	1.067	0.889
	(2.916)	(2.882)	(2.902)	(1.451)	(1.457)	(1.451)	(2.126)	(2.146)	(2.129)	(1.476)	(1.482)	(1.479)
t*Last quartile of consumption	-1.673	-1.404	-1.448	0.995	1.051	0.974	-2.125	-2.276	-2.361	0.868	0.844	0.729
	(3.088)	(3.088)	(3.080)	(1.452)	(1.449)	(1.446)	(2.469)	(2.447)	(2.419)	(1.384)	(1.379)	(1.409)
t*Household size	-0.180	-0.114	-0.182	0.047	0.045	0.053	-0.024	-0.006	-0.010	0.234	0.242	0.219
	(0.365)	(0.366)	(0.368)	(0.176)	(0.173)	(0.177)	(0.283)	(0.288)	(0.282)	(0.161)	(0.161)	(0.161)
t*Number working members	0.239	0.139	0.251	-0.546	-0.560	-0.573	-0.351	-0.327	-0.358	-0.525**	-0.514**	-0.525**
	(0.574)	(0.583)	(0.582)	(0.379)	(0.375)	(0.379)	(0.474)	(0.482)	(0.472)	(0.250)	(0.245)	(0.248)
t*Number non working members	0.773	0.672	0.757	0.166	0.170	0.164	0.053	0.110	0.082	-0.168	-0.160	-0.152
	(0.512)	(0.509)	(0.514)	(0.223)	(0.221)	(0.224)	(0.429)	(0.440)	(0.429)	(0.226)	(0.226)	(0.225)
t*Previously chronically ill	0.837	1.367	0.956	-1.035	-1.030	-0.977	2.325	2.102	1.818	-0.796	-0.769	-0.802
	(2.631)	(2.625)	(2.625)	(1.394)	(1.386)	(1.373)	(5.941)	(6.021)	(6.023)	(2.258)	(2.254)	(2.280)
t*Previous health shock in the household	2.647	2.774	2.558	0.911	0.874	0.903	-1.532	-1.438	-1.359	0.688	0.643	0.554
	(1.885)	(1.874)	(1.890)	(0.761)	(0.757)	(0.762)	(1.485)	(1.474)	(1.472)	(0.931)	(0.934)	(0.932)
t*Serere (Ref. Wolof/Leebu)	-1.117	-1.275	-1.057	0.648	0.688	0.623	-0.012	-0.108	-0.435	-1.005	-0.928	-1.065
	(2.843)	(2.852)	(2.843)	(1.240)	(1.240)	(1.248)	(2.636)	(2.634)	(2.709)	(1.727)	(1.761)	(1.755)
t*Poular	-3.825	-3.668	-3.862	-0.059	-0.060	-0.004	-3.508	-3.517	-3.315	1.229	1.218	1.125
	(2.445)	(2.417)	(2.444)	(1.003)	(1.010)	(1.006)	(2.169)	(2.165)	(2.169)	(1.322)	(1.320)	(1.305)
t*Diola	6.320	6.369	6.229	0.597	0.493	0.458	3.772	4.204	4.110	-0.604	-0.412	-0.780
	(4.669)	(4.646)	(4.661)	(1.065)	(1.059)	(1.056)	(3.939)	(3.993)	(3.961)	(1.437)	(1.402)	(1.456)
t*Other	1.747	1.622	1.721	-0.070	-0.035	-0.054	1.062	1.046	1.159	0.866	0.796	0.816
	(2.937)	(2.943)	(2.956)	(1.313)	(1.302)	(1.324)	(2.505)	(2.517)	(2.482)	(1.555)	(1.565)	(1.555)
t*Married	-2.799	-2.911	-2.947	-2.347**	-2.299**	-2.336**						
	(1.894)	(1.885)	(1.890)	(1.042)	(1.039)	(1.042)						
Own health shock		-1.025	-0.995		1.220	1.224		7.024	7.003		3.804*	2.984
		(2.796)	(2.795)		(1.887)	(1.907)		(5.017)	(5.083)		(2.219)	(2.310)
Constant	38.104***	37.931***	38.075***	8.870***	8.894***	8.900***	9.313***	9.347***	9.368***	4.681***	4.680***	4.705***
	(1.258)	(1.260)	(1.266)	(0.472)	(0.474)	(0.471)	(1.022)	(1.029)	(1.015)	(0.570)	(0.568)	(0.576)
Department × rural × time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5618	5618	5618	4606	4606	4606	2304	2304	2304	2198	2198	2198
Individuals	2809	2809	2809	2303	2303	2303	1152	1152	1152	1099	1099	1099
R-squared	0.113	0.114	0.111	0.130	0.131	0.131	0.197	0.199	0.200	0.123	0.122	0.123
Tests of equality of coefficients (p-values)												
Women / Men	0.056			0.835			0.232			0.242		
Child / Adult		0.196			0.688			0.573			0.828	
Worker / Non Worker			0.590			0.328			0.199			0.732

Source: PSF surveys 2006-2011. Sample is composed of 6-58 years old individuals. Dependent variable the number of weekly domestic hours performed at period t.
Time varying controls are : bad harvest, death events, migration, new born child.
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 13: Effect of a health shock on children's school enrolment - OLS model with individual fixed effects and baseline covariates

	Girls						Boys					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
At least another shock	0.009	0.009	0.008				0.035	0.038	0.039			
	(0.033)	(0.033)	(0.033)				(0.034)	(0.034)	(0.034)			
Male				0.065						0.010		
				(0.043)						(0.043)		
Female				-0.021						0.062*		
				(0.036)						(0.037)		
Child					-0.028						0.006	
					(0.050)						(0.072)	
Adult					-0.025						0.026	
					(0.038)						(0.034)	
Worker						-0.013						0.067*
						(0.039)						(0.039)
Not a worker						0.044						0.033
						(0.042)						(0.043)
Own health shock		-0.020	-0.017	-0.031	-0.020	-0.022		-0.118	-0.112	-0.125	-0.107	-0.137
		(0.067)	(0.068)	(0.067)	(0.067)	(0.067)		(0.083)	(0.084)	(0.084)	(0.085)	(0.083)
t*Age	-0.050***	-0.050***	-0.048***	-0.050***	-0.050***	-0.050***	-0.056***	-0.056***	-0.056***	-0.056***	-0.056***	-0.056***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
t*Household size	-0.010*	-0.010*	-0.010*	-0.010*	-0.010*	-0.011*	-0.005	-0.005	-0.005	-0.005	-0.005	-0.006
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
t*Number working members	0.014	0.014	0.013	0.013	0.014	0.014	0.007	0.006	0.008	0.007	0.007	0.006
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
t*Number non working members	0.023**	0.023**	0.023**	0.023**	0.024**	0.024**	0.003	0.003	0.003	0.003	0.003	0.003
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
t*Previously chronically ill	-0.013	-0.012	-0.004	-0.009	-0.005	-0.011	-0.010	-0.013	-0.007	-0.011	-0.011	-0.012
	(0.102)	(0.101)	(0.102)	(0.100)	(0.102)	(0.100)	(0.089)	(0.089)	(0.089)	(0.090)	(0.090)	(0.090)
t*Previous health shock in the household	0.027	0.027	0.030	0.024	0.028	0.024	0.062*	0.064*	0.060*	0.064*	0.065*	0.062*
	(0.031)	(0.031)	(0.031)	(0.031)	(0.031)	(0.031)	(0.035)	(0.035)	(0.034)	(0.035)	(0.035)	(0.035)
t*Serere (Ref. Wolof/Leebu)	0.058	0.059	0.057	0.060	0.059	0.064	0.024	0.026	0.019	0.024	0.028	0.022
	(0.053)	(0.053)	(0.053)	(0.053)	(0.054)	(0.054)	(0.058)	(0.058)	(0.058)	(0.058)	(0.059)	(0.059)
t*Poular	-0.027	-0.027	-0.033	-0.026	-0.029	-0.028	-0.015	-0.015	-0.015	-0.015	-0.015	-0.018
	(0.048)	(0.048)	(0.048)	(0.048)	(0.048)	(0.048)	(0.054)	(0.053)	(0.053)	(0.053)	(0.053)	(0.054)
t*Diola	-0.008	-0.010	-0.006	-0.011	-0.013	-0.006	0.108	0.105	0.112	0.104	0.109	0.096
	(0.051)	(0.051)	(0.054)	(0.051)	(0.051)	(0.052)	(0.077)	(0.077)	(0.077)	(0.079)	(0.076)	(0.078)
t*Other	-0.064	-0.064	-0.074	-0.061	-0.064	-0.063	0.005	0.003	0.006	0.005	0.004	0.003
	(0.058)	(0.058)	(0.058)	(0.058)	(0.058)	(0.058)	(0.055)	(0.055)	(0.054)	(0.055)	(0.055)	(0.055)
t*Second quartile of consumption (Ref. First)	-0.053	-0.053	-0.057	-0.050	-0.051	-0.053	0.043	0.042	0.040	0.041	0.044	0.039
	(0.045)	(0.044)	(0.045)	(0.045)	(0.044)	(0.044)	(0.045)	(0.044)	(0.043)	(0.044)	(0.045)	(0.045)
t*Third quartile of consumption	-0.059	-0.059	-0.068	-0.055	-0.059	-0.059	0.015	0.013	0.019	0.012	0.015	0.009
	(0.046)	(0.046)	(0.046)	(0.046)	(0.046)	(0.046)	(0.055)	(0.055)	(0.054)	(0.056)	(0.056)	(0.056)
t*Last quartile of consumption	0.001	0.001	-0.005	0.005	0.001	0.002	0.005	0.006	0.014	0.006	0.007	0.003
	(0.051)	(0.051)	(0.052)	(0.051)	(0.051)	(0.051)	(0.061)	(0.061)	(0.059)	(0.061)	(0.061)	(0.061)
Constant	0.587***	0.587***	0.584***	0.588***	0.589***	0.587***	0.618***	0.617***	0.619***	0.617***	0.617***	0.618***
	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.021)	(0.026)	(0.026)	(0.026)	(0.026)	(0.026)	(0.026)
Time varying controls	No	No	Yes	No	No	No	No	No	Yes	No	No	No
Department × rural × time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2304	2304	2304	2304	2304	2304	2198	2198	2198	2198	2198	2198
Individuals	1152	1152	1152	1152	1152	1152	1099	1099	1099	1099	1099	1099
R-squared	0.134	0.134	0.138	0.136	0.135	0.135	0.154	0.155	0.161	0.156	0.154	0.156
Tests of equality of coefficients (p-values)												
Women / Men				0.177						0.358		
Child / Adult					0.964						0.814	
Worker / Non Worker						0.326						0.538

Source: PSF surveys 2006-2011. Sample is composed of 6-14 years old individuals. Dependent variable is a dummy equal to 1 if the child is enrolled in French/ French-Arabic school at period t.
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 14: Semi parametric difference in difference (Abadie 2005) - Labor supply results

	Female	Male	Girls	Boys
	(1)	(2)	(3)	(4)
At least another member	0.004	0.037**	0.040	0.055**
	(0.018)	(0.018)	(0.025)	(0.028)
Another female	0.013	0.047**	0.007	0.064**
	(0.020)	(0.020)	(0.025)	(0.030)
Another male	0.012	-0.016	0.083**	0.004
	(0.022)	(0.022)	(0.033)	(0.034)
Another adult	-0.027	0.050**	0.035	0.092***
	(0.020)	(0.021)	(0.027)	(0.033)
Another child	-0.065**	-0.037	0.098*	0.028
	(0.029)	(0.025)	(0.051)	(0.050)
Another worker	0.037*	-0.028	0.035	0.056
	(0.021)	(0.020)	(0.030)	(0.035)
Another non worker	-0.020	0.081***	0.012	0.022
	(0.023)	(0.023)	(0.026)	(0.033)

Source: PSF surveys 2006-2011. Sample is restricted to 6-58 years old individuals in 2006.
Standard errors in brackets.
The ATT is computed from the absdid command in Stata (see Houngbedji (2016) for more details on the command).
Baseline covariates used : age, ever been enrolled in French school, was enrolled in French school school, marital status (only adults, ethnic group, previous health status, presence of at least another ill member, household size, number of working male and female members, quartiles of consumption per capita, area of residence.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 15: Semi parametric difference in difference (Abadie 2005) - Domestic hours results

	Female	Male	Girls	Boys
	(1)	(2)	(3)	(4)
At least another member	5.593***	0.655	1.821	1.305
	(1.852)	(0.801)	(1.489)	(0.886)
Another female	4.945**	0.723	1.865	1.835*
	(1.945)	(0.805)	(1.602)	(0.975)
Another male	0.530	0.337	1.999	0.178
	(2.168)	(1.160)	(1.966)	(1.174)
Another adult	7.291***	-0.275	0.467	0.767
	(1.967)	(0.865)	(1.663)	(1.048)
Another child	2.470	0.577	-0.791	0.739
	(2.939)	(1.354)	(2.601)	(0.865)
Another worker	2.740	1.634	3.371*	1.670
	(2.010)	(1.043)	(1.837)	(1.136)
Another non worker	3.649	-0.064	0.485	1.550
	(2.230)	(0.808)	(1.675)	(1.125)

Source: PSF surveys 2006-2011. Sample is restricted to 6-58 years old individuals in 2006.
Standard errors in brackets.
The ATT is computed from the absdid command in Stata (see Houngbedji (2016) for more details on the command).
Baseline covariates used : age, ever been enrolled in French school, was enrolled in French school school, marital status (only adults, ethnic group, previous health status, presence of at least another ill member, household size, number of working male and female members, quartiles of consumption per capita, area of residence.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 16: Semi parametric difference in difference (Abadie 2005) - School enrollment results

	Girls	Boys
	(1)	(2)
At least another member	0.015	0.015
	(0.026)	(0.028)
Another female	0.011	0.028
	(0.027)	(0.029)
Another male	0.044	0.035
	(0.031)	(0.035)
Another adult	-0.005	0.018
	(0.029)	(0.029)
Another child	-0.013	0.012
	(0.045)	(0.057)
Another worker	0.022	0.023
	(0.030)	(0.032)
Another non worker	0.013	0.018
	(0.032)	(0.032)

Source: PSF surveys 2006-2011. Sample is restricted to 6-58 years old individuals in 2006.
Standard errors in brackets.
The ATT is computed from the absdid command in Stata (see Houngbedji (2016) for more details on the command).
Baseline covariates used : age, ever been enrolled in French school, was enrolled in French school school, marital status (only adults, ethnic group, previous health status, presence of at least another ill member, household size, number of working male and female members, quartiles of consumption per capita, area of residence.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 18: Effect of a health shock on household members' labor supply depending on the gender, age and labor status of the ill member - Linear probability model with individual fixed effects - Corrected for attrition

	Female			Male			Girls			Boys		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Male	0.021			-0.019			0.107**			-0.038		
	(0.024)			(0.027)			(0.042)			(0.042)		
Female	0.020			0.064***			-0.029			0.055		
	(0.022)			(0.022)			(0.033)			(0.035)		
Child		-0.061**			-0.027			0.067			-0.004	
		(0.027)			(0.031)			(0.063)			(0.057)	
Adult		-0.008			0.052**			0.051			0.087**	
		(0.021)			(0.023)			(0.036)			(0.035)	
Worker			0.065***			-0.025			0.015			0.020
			(0.024)			(0.024)			(0.038)			(0.043)
Not a worker			-0.029			0.091***			0.020			-0.002
			(0.024)			(0.025)			(0.038)			(0.036)
Own health shock	-0.031	-0.029	-0.029	-0.106**	-0.102**	-0.106**	-0.125*	-0.106	-0.109	0.016	0.035	0.016
	(0.034)	(0.034)	(0.034)	(0.046)	(0.047)	(0.047)	(0.074)	(0.073)	(0.074)	(0.119)	(0.115)	(0.118)
IMR (women)	-0.089	-0.091	-0.082									
	(0.086)	(0.085)	(0.085)									
IMR (men)				0.188**	0.179**	0.191**						
				(0.077)	(0.077)	(0.077)						
IMR (girls)							-0.050	-0.038	-0.045			
							(0.073)	(0.075)	(0.077)			
IMR (boys)										-0.077	-0.076	-0.077
										(0.069)	(0.069)	(0.070)
Age	-0.003***	-0.003***	-0.003***	-0.005***	-0.005***	-0.005***	0.004	0.004	0.004	-0.001	-0.001	-0.000
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.005)	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)
Constant	0.493***	0.493***	0.494***	0.744***	0.743***	0.743***	0.143***	0.140***	0.142***	0.207***	0.205***	0.209***
	(0.014)	(0.015)	(0.014)	(0.013)	(0.013)	(0.012)	(0.019)	(0.019)	(0.019)	(0.020)	(0.020)	(0.020)
Department × rural × time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5286	5286	5286	4160	4160	4160	1730	1730	1730	1614	1614	1614
Individuals	2643	2643	2643	2080	2080	2080	865	865	865	807	807	807
R-squared	0.076	0.077	0.079	0.119	0.118	0.122	0.196	0.191	0.187	0.270	0.272	0.267
Tests of equality of coefficients (p-values)												
Women / Men	0.981			0.033			0.018			0.117		
Child / Adult		0.116			0.041			0.833			0.180	
Worker / Non Worker			0.006			0.002			0.931			0.716

Source: PSF surveys 2006-2011. Sample is composed of 6-58 years old individuals. Dependent variable is a dummy equal to 1 if individual i worked at period t.
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 19: Effect of a health shock on household members' domestic hours depending on the gender, age and labor status of the ill member - Linear probability model with individual fixed effects - Corrected for attrition

	Female			Male			Girls			Boys		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Male	-0.221			-0.870			2.380			-0.402		
	(2.437)			(1.412)			(2.130)			(1.431)		
Female	6.632***			-0.197			-0.305			0.599		
	(2.168)			(0.942)			(1.988)			(1.131)		
Child		2.587			-0.330			0.904			-0.149	
		(3.249)			(1.613)			(4.015)			(1.442)	
Adult		7.226***			-0.733			-0.565			0.204	
		(2.190)			(1.126)			(1.945)			(1.083)	
Worker			2.236			-0.413			1.578			1.293
			(2.285)			(1.210)			(2.098)			(1.309)
Not a worker			4.872**			-0.501			0.825			-0.537
			(2.378)			(1.035)			(2.273)			(1.144)
Own health shock	-1.812	-1.733	-1.959	0.371	0.426	0.415	8.482**	8.971**	8.708**	3.066	3.174	2.996
	(2.885)	(2.864)	(2.866)	(1.769)	(1.753)	(1.768)	(4.054)	(4.014)	(4.034)	(3.195)	(3.202)	(3.240)
IMR (women)	3.989	3.062	5.046									
	(8.708)	(8.673)	(8.648)									
IMR (men)				-1.745	-1.644	-1.749						
				(3.204)	(3.174)	(3.205)						
IMR (girls)							2.583	2.822	2.329			
							(4.910)	(4.880)	(4.936)			
IMR (boys)										-1.485	-1.488	-1.487
										(1.973)	(1.969)	(1.976)
Age	-0.408***	-0.412***	-0.416***	0.022	0.024	0.023	1.240***	1.252***	1.242***	-0.459***	-0.459***	-0.456***
	(0.059)	(0.059)	(0.059)	(0.027)	(0.028)	(0.027)	(0.330)	(0.328)	(0.329)	(0.165)	(0.166)	(0.165)
Constant	37.037***	36.792***	37.022***	7.653***	7.685***	7.665***	9.030***	9.024***	9.016***	4.165***	4.165***	4.234***
	(1.327)	(1.319)	(1.337)	(0.483)	(0.488)	(0.484)	(1.241)	(1.242)	(1.235)	(0.546)	(0.537)	(0.553)
Department × rural × time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5286	5286	5286	4160	4160	4160	1730	1730	1730	1614	1614	1614
Individuals	2643	2643	2643	2080	2080	2080	865	865	865	807	807	807
R-squared	0.102	0.104	0.101	0.122	0.122	0.122	0.196	0.195	0.195	0.157	0.157	0.158
Tests of equality of coefficients (p-values)												
Women / Men	0.055			0.719			0.384			0.616		
Child / Adult		0.254			0.843			0.751			0.853	
Worker / Non Worker			0.471			0.959			0.822			0.313

Source: PSF surveys 2006-2011. Sample is composed of 6-58 years old individuals. Dependent variable the number of weekly domestic hours performed at period t.
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 20: Effect of a health shock on children's school enrollment - OLS model with individual fixed effects - Corrected for attrition

	Girls						Boys					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
At least another shock	0.028	0.028	0.027				0.012	0.013	0.009			
	(0.039)	(0.039)	(0.038)				(0.043)	(0.043)	(0.042)			
Male				0.079						-0.030		
				(0.051)						(0.052)		
Female				-0.007						0.050		
				(0.042)						(0.046)		
Child					-0.028						-0.066	
					(0.068)						(0.084)	
Adult					-0.007						0.018	
					(0.045)						(0.040)	
Worker						-0.011						0.064
						(0.043)						(0.048)
Not a worker						0.051						0.010
						(0.051)						(0.048)
Bad harvest			-0.060						0.024			
			(0.056)						(0.071)			
Death			-0.105						0.190*			
			(0.071)						(0.109)			
Migration			-0.009						0.000			
			(0.045)						(0.052)			
Household size			-0.007**						0.006*			
			(0.003)						(0.004)			
New born child			-0.120									
			(0.088)									
Own health shock		-0.038	-0.042	-0.050	-0.037	-0.041		-0.014	0.009	-0.015	0.008	-0.028
		(0.072)	(0.074)	(0.071)	(0.072)	(0.072)		(0.087)	(0.087)	(0.086)	(0.088)	(0.088)
IMR (girls)	0.375***	0.375***	0.356***	0.370***	0.375***	0.383***						
	(0.121)	(0.121)	(0.117)	(0.123)	(0.121)	(0.122)						
IMR (boys)							-0.204**	-0.205**	-0.197*	-0.205**	-0.205**	-0.203**
							(0.101)	(0.101)	(0.101)	(0.100)	(0.101)	(0.100)
Age	-0.048***	-0.048***	-0.046***	-0.048***	-0.048***	-0.048***	-0.058***	-0.058***	-0.059***	-0.058***	-0.059***	-0.058***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Constant	0.610***	0.609***	0.690***	0.611***	0.610***	0.608***	0.601***	0.601***	0.526***	0.600***	0.600***	0.603***
	(0.025)	(0.025)	(0.047)	(0.025)	(0.025)	(0.026)	(0.030)	(0.030)	(0.053)	(0.030)	(0.030)	(0.030)
Department × rural × time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1730	1730	1730	1730	1730	1730	1614	1614	1614	1614	1614	1614
Individuals	865	865	865	865	865	865	807	807	807	807	807	807
R-squared	0.133	0.133	0.143	0.136	0.133	0.134	0.161	0.161	0.169	0.162	0.162	0.162
Tests of equality of coefficients (p-values)												
Women / Men				0.251						0.216		
Child / Adult					0.798						0.382	
Worker / Non Worker						0.371						0.386

Source: PSF surveys 2006-2011. Sample is composed of 6-14 years old individuals. Dependent variable is a dummy equal to 1 if the child is enrolled in French/ French-Arabic school at period t.
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 17: Determinants of attrition and missing values - Probit model

	Female		Male		Girls		Boys	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Age	-0.004	-0.004	-0.004	-0.004	0.012	0.013	-0.051**	-0.050**
	(0.003)	(0.003)	(0.004)	(0.004)	(0.019)	(0.020)	(0.023)	(0.025)
Ever been to French school	-0.066	-0.049	0.159	0.185*	-0.311**	-0.291*	0.222	0.158
	(0.075)	(0.076)	(0.101)	(0.105)	(0.156)	(0.154)	(0.158)	(0.170)
Second quartile of consumption (Ref. First)	-0.032	-0.056	-0.008	0.040	-0.087	0.050	-0.054	-0.096
	(0.120)	(0.121)	(0.154)	(0.151)	(0.182)	(0.173)	(0.168)	(0.182)
Third quartile of consumption	-0.088	-0.131	-0.088	-0.165	-0.165	-0.114	0.256	0.375*
	(0.124)	(0.129)	(0.157)	(0.157)	(0.199)	(0.194)	(0.200)	(0.209)
Last quartile of consumption	0.045	0.003	-0.083	-0.186	-0.130	-0.159	-0.288	-0.262
	(0.131)	(0.135)	(0.175)	(0.172)	(0.229)	(0.229)	(0.206)	(0.232)
Household size	-0.011	-0.005	-0.015	-0.014	-0.045*	-0.060**	-0.001	-0.009
	(0.015)	(0.015)	(0.017)	(0.018)	(0.026)	(0.027)	(0.028)	(0.030)
Number working members	0.014	0.013	0.010	0.016	0.093**	0.122***	-0.057	-0.063
	(0.026)	(0.025)	(0.027)	(0.028)	(0.039)	(0.041)	(0.043)	(0.051)
Number non working members	0.016	0.009	0.019	0.012	0.050	0.072*	-0.012	-0.002
	(0.023)	(0.023)	(0.025)	(0.025)	(0.038)	(0.039)	(0.041)	(0.045)
Previous health shock in the household	-0.054	-0.011	-0.089	-0.104	0.002	-0.031	-0.061	0.008
	(0.072)	(0.073)	(0.088)	(0.086)	(0.126)	(0.136)	(0.127)	(0.140)
Previously chronically ill	-0.071	-0.005	0.119	0.170	-0.035	-0.338	-0.857*	-0.848*
	(0.118)	(0.121)	(0.148)	(0.150)	(0.320)	(0.385)	(0.442)	(0.435)
Serere (Ref. Wolof/Leebu)	0.015	0.000	-0.151	-0.275*	-0.008	-0.213	-0.321	-0.312
	(0.125)	(0.131)	(0.154)	(0.156)	(0.204)	(0.218)	(0.228)	(0.244)
Poular	0.024	-0.013	-0.271**	-0.241**	-0.085	-0.068	-0.505**	-0.514**
	(0.094)	(0.090)	(0.122)	(0.118)	(0.167)	(0.176)	(0.198)	(0.221)
Diola	-0.233	-0.217	-0.363*	-0.258	-0.105	-0.095	-0.281	-0.258
	(0.202)	(0.214)	(0.214)	(0.226)	(0.312)	(0.311)	(0.403)	(0.398)
Other	-0.135	-0.154	-0.219	-0.306*	-0.310	-0.254	-0.232	-0.322
	(0.123)	(0.128)	(0.153)	(0.162)	(0.189)	(0.208)	(0.220)	(0.254)
Married	-0.169**	-0.170**	-0.206*	-0.228**				
	(0.070)	(0.070)	(0.105)	(0.104)				
Constant	-0.662***	-0.899***	-0.627**	-1.237***	-0.672*	-1.328*	-0.846*	-1.558**
	(0.209)	(0.328)	(0.303)	(0.370)	(0.394)	(0.682)	(0.443)	(0.694)
Department × rural × time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Interviewer dummies	No	Yes	No	Yes	No	Yes	No	Yes
Observations	3124	3097	2390	2371	1065	1025	1157	963
Individuals								
R-squared	0.080	0.121	0.062	0.121	0.092	0.152	0.185	0.249
Test of joint significance of interviewers dummies (p-values)								
		0.000		0.000		0.000		0.000

Source: PSF surveys 2006-2011. Sample is composed of 6-58 years old individuals. Source: PSF surveys 2006-2011. Sample is composed of 6-58 years old individuals. Dependent variable is a dummy equal to 1 if individual i worked at period t or if one of the variables of interest are missing. The estimation includes enumerators fixed effects (not shown).
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 21: Effect of a health shock on healthy household members' labor supply within the household - Linear probability model with household fixed effects

	Female	Male	Girls	Boys
	(1)	(2)	(3)	(4)
Spouse	0.118**	-0.046		
	(0.056)	(0.045)		
Father	0.031	0.006	0.014	-0.060
	(0.055)	(0.052)	(0.060)	(0.069)
Mother	0.033	0.027	-0.070	0.050
	(0.057)	(0.043)	(0.061)	(0.071)
Daughter	0.111*	0.025		
	(0.064)	(0.050)		
Son	0.103*	0.078		
	(0.055)	(0.080)		
Cowife	0.112			
	(0.077)			
Mother's cowife	0.010	-0.004	-0.109	0.005
	(0.120)	(0.072)	(0.076)	(0.094)
Parents-in-law	0.112			
	(0.090)			
Other male*	0.019	-0.037	-0.019	-0.075
	(0.040)	(0.056)	(0.062)	(0.066)
Other female*	-0.029	0.059	-0.058	-0.080
	(0.042)	(0.046)	(0.059)	(0.061)
Constant	0.454***	0.737***	0.153***	0.285***
	(0.033)	(0.027)	(0.041)	(0.046)
Department × rural × time	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes
Observations	1428	1356	728	680
Households	325	312	215	204
R-squared	0.063	0.076	0.268	0.248

Source: PSF surveys 2006-2011. Sample is composed of 6-58 years old individuals. Dependent variable is a the number of weekly domestic hours performed at period t.
* Other male and female health shocks comprise mother and father in law for men (concern less than 1% of the men sample)
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 22: Effect of a health shock on healthy household members' domestic hours within the household - Linear probability model with household fixed effects

	Female	Male	Girls	Boys
	(1)	(2)	(3)	(4)
Spouse	-8.783*	-2.351		
	(4.969)	(2.234)		
Father	-3.715	0.483	0.545	-3.302
	(5.098)	(2.362)	(3.604)	(2.355)
Mother	-1.060	-0.129	3.526	-0.313
	(5.311)	(1.918)	(3.049)	(2.154)
Daughter	-4.338	-1.745		
	(5.298)	(3.265)		
Son	-13.364**	-1.297		
	(6.205)	(3.294)		
Cowife	3.328			
	(7.361)			
Mother's cowife	18.016**	-7.376**	-2.044	5.727
	(9.127)	(3.060)	(4.332)	(3.481)
Parents-in-law	11.732			
	(7.629)			
Other male*	-10.608**	-0.955	1.292	0.608
	(4.194)	(2.576)	(3.619)	(2.043)
Other female*	-0.069	-0.572	-4.560	0.817
	(4.202)	(2.271)	(3.129)	(1.746)
Age	-0.359***	0.011	2.498***	0.471
	(0.091)	(0.041)	(0.375)	(0.314)
Constant	43.981***	8.793***	-20.047***	1.958
	(3.613)	(1.565)	(4.408)	(3.391)
Department × rural × time	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes
Observations	1428	1356	728	680
Households	325	312	215	204
R-squared	0.138	0.180	0.278	0.256

Source: PSF surveys 2006-2011. Sample is composed of 6-58 years old individuals. Dependent variable is a dummy equal to 1 if individual i worked at period t.
*Other male and female health shocks comprise mother and father in law for men (concern less than 1% of the men sample)
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 23: Effect of a health shock on healthy household children's schooling within the household - Linear probability model with household fixed effects

	Girls	Boys
	(1)	(2)
Father	0.129**	-0.008
	(0.062)	(0.068)
Mother	0.059	0.030
	(0.052)	(0.065)
Mother's cowife	0.149*	0.162***
	(0.076)	(0.060)
Other male	0.099	-0.157***
	(0.074)	(0.056)
Other female	-0.015	0.022
	(0.068)	(0.065)
Age	-0.027**	-0.039***
	(0.012)	(0.010)
Constant	0.891***	0.970***
	(0.125)	(0.108)
Department × rural × time	Yes	Yes
Months of interview	Yes	Yes
Observations	728	680
Households	215	204
R-squared	0.167	0.212

Source: PSF surveys 2006-2011. Sample is composed of 6-14 years old individuals. Dependent variable is a dummy equal to 1 if individual i was enrolled in French school at period t.
Note that other male and female health shocks comprise mother and father in law for men (concern less than 1% of the men sample)
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Supplementary Materials

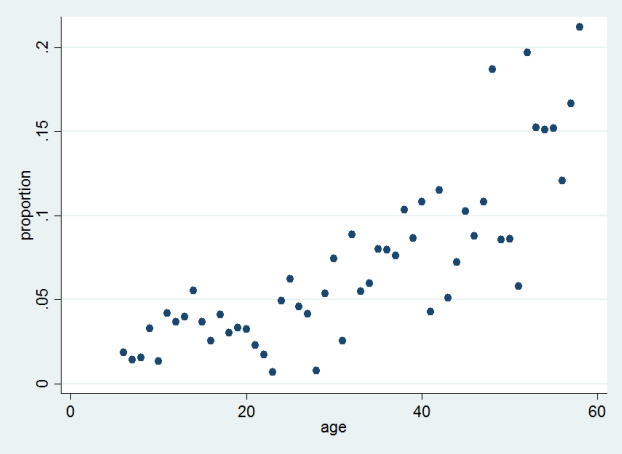
Correlation between the report of a chronic illness and medical expenditures

Table S1: Correlation between chronic illness and medical expenses: individuals 6-58 in 2006

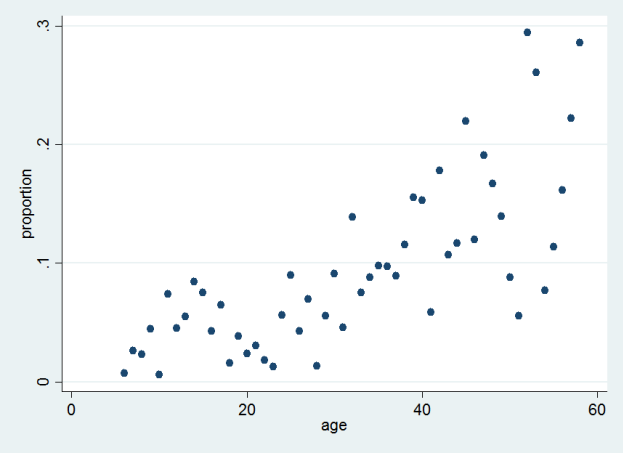
	Health expenses (dummy)		Total health expenses			
	OLS		OLS		Tobit	
	(1)	(2)	(3)	(4)	(5)	(6)
Own health shock	0.490***	0.360***	20.780***	18.353***	43.360***	33.006***
	(0.025)	(0.027)	(1.900)	(1.854)	(2.626)	(2.527)
Female		0.081***		2.581***		8.663***
		(0.011)		(0.402)		(1.082)
Age		0.006***		0.222***		0.872***
		(0.002)		(0.070)		(0.178)
Age^2		-0.000		-0.001		-0.007**
		(0.000)		(0.001)		(0.003)
Ever been enrolled in French school		0.016		1.047*		2.417
		(0.015)		(0.584)		(1.555)
Ever been enrolled in Koranic school		0.029		1.600**		3.749**
		(0.018)		(0.781)		(1.853)
Chronically ill		0.137***		7.370***		15.308***
		(0.026)		(1.496)		(2.468)
Log consumption per capita		0.017*		1.315***		2.809***
		(0.009)		(0.319)		(0.831)
Rural		-0.013		-0.908		-2.318
		(0.025)		(0.737)		(2.279)
Constant	0.312***	-0.143	6.028***	-16.781***	-21.260***	-80.445***
	(0.009)	(0.128)	(0.242)	(4.469)	(1.167)	(11.952)
Department dummies	No	Yes	No	Yes	No	Yes
Observations	7216	7216	7216	7216	7216	7216
Left-censored observations					4795	4795
R-squared	0.049	0.142	0.057	0.114		
Pseudo R-squared					0.013	0.036

Source: PSF surveys 2006-2011. Sample is composed of 6-58 years old individuals.
Health expenses are defined for the year preceding the interview at the individual level and declared by the respondent to the health module of the survey.
Covariates are baseline characteristics
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

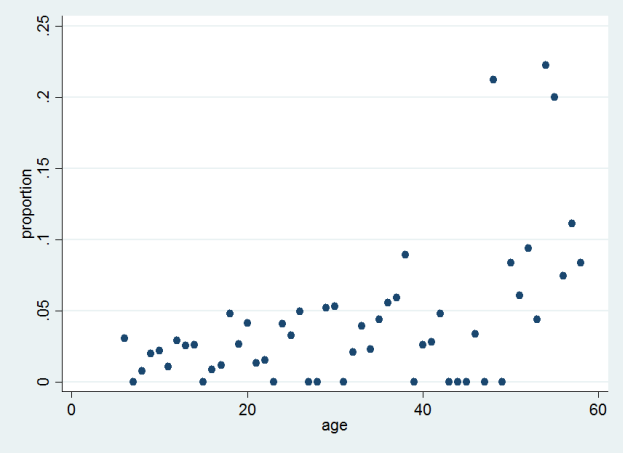
Proportion of chronically ill individuals by age



(a) All



(b) Female



(c) Male

Figure 1: Proportion of chronically ill individuals by age

Robustness analyses

Work measure : Non retrospective data

Table S2: Effect of a health shock on household members' labor supply (non retrospective data) depending on the gender, age and labor status of the ill member - Linear probability model with individual fixed effects

	Female			Male			Girls			Boys		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Male	0.116***			-0.007			0.107**			0.026		
	(0.035)			(0.034)			(0.042)			(0.048)		
Female	0.013			0.068**			-0.000			0.052		
	(0.031)			(0.027)			(0.034)			(0.040)		
Child		0.049			-0.007			0.019			0.060	
		(0.040)			(0.048)			(0.052)			(0.063)	
Adult		0.011			0.034			0.060*			0.079*	
		(0.031)			(0.025)			(0.034)			(0.041)	
Worker			0.099***			0.053*			0.092**			0.051
			(0.035)			(0.031)			(0.041)			(0.048)
Not a worker			0.001			0.039			0.003			0.016
			(0.033)			(0.028)			(0.038)			(0.043)
Own health shock	0.041	0.053	0.049	-0.102*	-0.096*	-0.098*	-0.054	-0.039	-0.045	0.106	0.115	0.105
	(0.041)	(0.041)	(0.041)	(0.052)	(0.053)	(0.052)	(0.076)	(0.075)	(0.076)	(0.103)	(0.101)	(0.105)
Age	-0.001*	-0.002*	-0.001	-0.007***	-0.007***	-0.007***	0.019***	0.020***	0.019***	0.025***	0.024***	0.025***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.005)	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)
Constant	0.448***	0.446***	0.448***	0.694***	0.694***	0.694***	0.137***	0.133***	0.138***	0.148***	0.146***	0.149***
	(0.019)	(0.019)	(0.019)	(0.013)	(0.013)	(0.013)	(0.020)	(0.020)	(0.020)	(0.024)	(0.024)	(0.024)
Department*rural*time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5607	5607	5607	4585	4585	4585	2279	2279	2279	2162	2162	2162
Individuals	2809	2809	2809	2303	2303	2303	1152	1152	1152	1099	1099	1099
R-squared	0.195	0.191	0.194	0.218	0.215	0.217	0.367	0.364	0.366	0.376	0.378	0.375
Tests of equality of coefficients (p-values)												
Women / Men	0.044			0.110			0.060			0.695		
Child / Adult		0.471			0.431			0.516			0.800	
Worker / Non Worker			0.066			0.757			0.125			0.619

Source: PSF surveys 2006-2011. Sample is composed of 6-58 years old individuals. Dependent variable is a dummy equal to 1 if individual i worked at period t.
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table S3: Effect of a health shock on household members' labor supply (non retrospective data) depending on the position within the household - Linear probability model with individual fixed effects

	Female			Male			Girls			Boys		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Household head	0.073**			0.033			0.069*			0.022		
	(0.033)			(0.041)			(0.040)			(0.048)		
Non household head	0.041			0.049**			0.050			0.052		
	(0.031)			(0.025)			(0.036)			(0.040)		
Cell head		0.021			0.111**			-0.045			0.059	
		(0.046)			(0.044)			(0.044)			(0.052)	
Non cell head		0.056**			0.032			0.075**			0.038	
		(0.028)			(0.024)			(0.035)			(0.038)	
Member of the same cell			0.043			0.062*			-0.002			0.046
			(0.034)			(0.035)			(0.038)			(0.043)
Member of another cell			0.052*			0.040			0.078**			0.041
			(0.030)			(0.025)			(0.037)			(0.041)
Own health shock	0.047	0.048	0.046	-0.097*	-0.095*	-0.097*	-0.039	-0.048	-0.037	0.107	0.099	0.102
	(0.041)	(0.041)	(0.041)	(0.052)	(0.052)	(0.052)	(0.077)	(0.076)	(0.075)	(0.103)	(0.101)	(0.102)
Age	-0.001	-0.001	-0.001	-0.007***	-0.007***	-0.007***	0.019***	0.020***	0.019***	0.024***	0.024***	0.025***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.005)	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)
Constant	0.448***	0.447***	0.447***	0.695***	0.694***	0.694***	0.136***	0.136***	0.136***	0.148***	0.148***	0.148***
	(0.019)	(0.019)	(0.019)	(0.013)	(0.013)	(0.013)	(0.020)	(0.020)	(0.020)	(0.024)	(0.024)	(0.024)
Department × rural × time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5607	5607	5607	4585	4585	4585	2279	2279	2279	2162	2162	2162
Individuals	2809	2809	2809	2303	2303	2303	1152	1152	1152	1099	1099	1099
R-squared	0.193	0.192	0.192	0.217	0.219	0.217	0.365	0.366	0.365	0.376	0.376	0.376
Tests of equality of coefficients (p-values)												
Household head / Non household head	0.526			0.742			0.744			0.650		
Cell head / Non cell head		0.526			0.124			0.031			0.725	
In the cell/ Not in the cell			0.836			0.581			0.119			0.929

Source: PSF surveys 2006-2011. Sample is composed of 6-58 years old individuals. Dependent variable is a dummy equal to 1 if individual i worked at period t.
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Domestic hours : non corrected

Table S4: Effect of a health shock on household members' domestic hours (non corrected) - OLS model with individual fixed effects

	Female			Male			Girls			Boys		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
At least another shock	4.029**	4.104**	4.064**	-1.333	-1.355	-1.378	0.540	0.534	0.627	1.871*	1.769*	1.684*
	(1.728)	(1.727)	(1.705)	(1.027)	(1.029)	(1.043)	(1.347)	(1.343)	(1.269)	(0.953)	(0.966)	(0.957)
Own health shock		-1.876	-2.017		1.044	1.070		8.207*	8.639**		3.655	4.151
		(2.486)	(2.441)		(1.963)	(1.971)		(4.533)	(4.355)		(2.459)	(2.589)
Bad harvest			0.484			-0.822			0.179			-5.621***
			(2.799)			(1.952)			(2.099)			(1.714)
Death			1.282			-0.136			3.796*			-0.349
			(3.519)			(2.159)			(2.156)			(1.101)
Migration			5.039***			0.440			2.236			-1.490
			(1.712)			(0.865)			(1.459)			(1.050)
Household size			-0.199			-0.043			-0.357***			-0.011
			(0.141)			(0.076)			(0.099)			(0.071)
New born child			11.213***						27.107***			
			(1.601)						(4.743)			
Age	-0.330***	-0.323***	-0.162***	0.024	0.022	0.024	0.546**	0.491**	0.014	-0.503***	-0.509***	-0.543***
	(0.049)	(0.049)	(0.050)	(0.027)	(0.027)	(0.027)	(0.251)	(0.248)	(0.235)	(0.144)	(0.145)	(0.146)
Constant	33.363***	33.386***	35.581***	9.135***	9.137***	9.596***	9.676***	9.663***	13.528***	4.707***	4.716***	4.454***
	(1.158)	(1.157)	(1.956)	(0.493)	(0.492)	(1.026)	(0.866)	(0.863)	(1.444)	(0.547)	(0.548)	(1.001)
Department × rural × time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5618	5618	5618	4606	4606	4606	2304	2304	2304	2198	2198	2198
Individuals	2809	2809	2809	2303	2303	2303	1152	1152	1152	1099	1099	1099
R-squared	0.127	0.127	0.150	0.129	0.129	0.129	0.156	0.162	0.242	0.111	0.112	0.130

Source: PSF surveys 2006-2011. Sample is composed of 6-58 years old individuals. Dependent variable is the number of weekly domestic hours performed at period t.
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table S5: Effect of a health shock on household members' domestic hours (non corrected) depending on the gender, age and labor status of the ill member - Linear probability model with individual fixed effects

	Female			Male			Girls			Boys		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Male	-0.198			-0.973			1.621			-0.250		
	(2.364)			(1.506)			(1.777)			(1.427)		
Female	4.459**			-1.128			-0.289			2.541**		
	(2.010)			(1.041)			(1.542)			(1.089)		
Child		3.181			-1.017			-2.464			0.952	
		(3.251)			(1.692)			(2.898)			(1.610)	
Adult		5.331***			-1.214			0.416			1.536	
		(1.975)			(1.203)			(1.477)			(1.074)	
Worker			1.437			-0.166			1.948			1.608
			(2.038)			(1.275)			(1.615)			(1.268)
Not a worker			3.713			-1.566			-0.834			1.873
			(2.323)			(1.128)			(1.719)			(1.173)
Own health shock	-1.728	-1.751	-1.846	1.005	1.010	1.042	7.961*	8.129*	8.137*	3.519	4.101*	3.120
	(2.487)	(2.489)	(2.487)	(1.978)	(1.952)	(1.973)	(4.557)	(4.482)	(4.561)	(2.366)	(2.401)	(2.457)
Age	-0.322***	-0.320***	-0.327***	0.022	0.023	0.024	0.485*	0.482*	0.485*	-0.508***	-0.508***	-0.510***
	(0.049)	(0.049)	(0.049)	(0.027)	(0.027)	(0.027)	(0.248)	(0.248)	(0.248)	(0.145)	(0.146)	(0.145)
Constant	33.420***	33.267***	33.379***	9.114***	9.148***	9.148***	9.690***	9.686***	9.740***	4.727***	4.694***	4.735***
	(1.155)	(1.147)	(1.163)	(0.486)	(0.494)	(0.487)	(0.866)	(0.864)	(0.860)	(0.548)	(0.545)	(0.553)
Department × rural × time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5618	5618	5618	4606	4606	4606	2304	2304	2304	2198	2198	2198
Individuals	2809	2809	2809	2303	2303	2303	1152	1152	1152	1099	1099	1099
R-squared	0.127	0.128	0.126	0.129	0.129	0.129	0.162	0.162	0.163	0.114	0.111	0.113
Tests of equality of coefficients (p-values)												
Women / Men	0.170			0.939			0.434			0.178		
Child / Adult		0.588			0.928			0.397			0.764	
Worker / Non Worker			0.501			0.448			0.269			0.888

Source: PSF surveys 2006-2011. Sample is composed of 6-58 years old individuals. Dependent variable the number of weekly domestic hours performed at period t.
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table S6: Effect of a health shock on household members' domestic hours depending on the position within the household - Linear probability model with individual fixed effects

	Female			Male			Girls			Boys		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Household head	3.084			-0.498			1.371			0.232		
	(2.598)			(1.748)			(2.035)			(1.408)		
Non household head	2.632			-0.879			0.056			1.888*		
	(1.895)			(0.973)			(1.468)			(1.045)		
Cell head		6.000*			-0.757			0.931			1.718	
		(3.154)			(1.475)			(2.265)			(1.505)	
Non cell head		3.781**			-1.261			0.933			1.807*	
		(1.802)			(1.077)			(1.436)			(1.050)	
Member of the same cell			-0.745			0.135			1.056			2.081
			(2.193)			(1.171)			(1.743)			(1.270)
Member of another cell			5.853***			-1.464			1.274			1.171
			(1.951)			(1.171)			(1.478)			(1.163)
Own health shock	-1.772	-1.842	-1.661	0.960	1.043	1.030	8.167*	8.188*	8.105*	3.566	3.295	3.326
	(2.479)	(2.480)	(2.499)	(1.983)	(1.970)	(1.958)	(4.536)	(4.528)	(4.558)	(2.470)	(2.505)	(2.590)
Age	-0.325***	-0.312***	-0.332***	0.024	0.022	0.026	0.483*	0.485*	0.480*	-0.509***	-0.509***	-0.506***
	(0.049)	(0.050)	(0.049)	(0.027)	(0.028)	(0.027)	(0.248)	(0.249)	(0.249)	(0.145)	(0.144)	(0.145)
Constant	33.421***	33.391***	33.367***	9.109***	9.118***	9.108***	9.705***	9.672***	9.666***	4.716***	4.725***	4.740***
	(1.161)	(1.161)	(1.164)	(0.489)	(0.490)	(0.488)	(0.862)	(0.862)	(0.862)	(0.553)	(0.548)	(0.548)
Department × rural × time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5618	5618	5618	4606	4606	4606	2304	2304	2304	2198	2198	2198
Individuals	2809	2809	2809	2303	2303	2303	1152	1152	1152	1099	1099	1099
R-squared	0.126	0.128	0.129	0.128	0.129	0.129	0.162	0.162	0.162	0.112	0.113	0.113
Tests of equality of coefficients (p-values)												
Household head / Non household head	0.896			0.855			0.601			0.365		
Cell head / Non cell head		0.561			0.796			1.000			0.960	
In the cell/ Not in the cell			0.021			0.337			0.927			0.557

Source: PSF surveys 2006-2011. Sample is composed of 6-58 years old individuals. Dependent variable the number of weekly domestic hours performed at period t.
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Domestic hours : censored model

Table S7: Effect of a health shock on household members' domestic hours - Censored model with individual fixed effects (Honore 1992's estimator)

	Female				Male				Girls				Boys			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
At least another shock	9.551***				-3.843				1.901				7.682			
	(2.249)				(2.521)				(3.237)				(5.036)			
Male		1.341				-2.724				4.333				0.621		
		(2.858)				(4.435)				(4.648)				(6.350)		
Female		9.541***				-2.327				-0.909				10.940**		
		(2.491)				(3.616)				(3.461)				(4.608)		
Child			2.655				-4.310				-4.938				7.010	
			(3.723)				(5.625)				(6.894)				(9.428)	
Adult			10.916***				-3.640				0.997				6.505	
			(2.849)				(3.270)				(3.284)				(5.048)	
Worker				4.889**				-0.306				2.601				8.080
				(2.408)				(3.851)				(4.466)				(5.139)
Not a worker				7.521***				-4.424				0.693				7.826
				(2.455)				(4.459)				(4.840)				(5.488)
Own health shock	-4.283	-4.030	-3.843	-4.237	5.493	5.205	5.565	5.363	11.860	11.201	12.448	11.702	3.710	1.242	5.259	-0.859
	(3.547)	(3.396)	(3.264)	(3.486)	(4.491)	(3.520)	(4.534)	(4.781)	(10.422)	(10.809)	(10.553)	(11.253)	(7.616)	(7.415)	(7.663)	(7.931)
Age	-0.784**	-0.771**	-0.782**	-0.770*	-0.151	-0.139	-0.174	-0.132	1.916	1.946	1.993	1.903	-0.418	-0.258	-0.388	-0.510
	(0.328)	(0.369)	(0.344)	(0.413)	(0.280)	(0.441)	(0.334)	(0.306)	(1.192)	(1.364)	(1.393)	(1.389)	(1.420)	(1.230)	(1.314)	(0.965)
Department and rural × time dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5618	5618	5618	5618	4603	4603	4603	4603	2304	2304	2304	2304	2197	2197	2197	2197
Individuals																
R-squared																
Tests of equality of coefficients (p-values)																
Women / Men		0.018				0.953				0.417				0.181		
Child / Adult			0.084				0.915				0.432				0.965	
Worker / Non Worker				0.511				0.501				0.785				0.970

Source: PSF surveys 2006-2011. Sample is composed of 6-58 years old individuals. Dependent variable is the number of weekly domestic hours performed by individual i at period t.
Bootstrapped standard errors in brackets.
This estimation was computed from the pantob command in Stata available here : : www.princeton.edu/~honore/stata/index.html. Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table S8: Effect of a health shock on household members' domestic hours depending on the position within the household - Censored model with individual fixed effects (Honore 1992's estimator

	Female			Male			Girls			Boys		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
At least another shock												
Household head	7.207**			-1.402			2.282			3.098		
	(3.099)			(5.040)			(4.673)			(5.847)		
Non household head	6.960***			-1.924			0.895			6.453		
	(2.387)			(2.733)			(3.458)			(4.284)		
Cell head		13.828***			-0.320			3.624			5.368	
		(4.465)			(5.061)			(6.496)			(5.911)	
Non cell head		8.372***			-4.704			2.112			7.226	
		(1.968)			(2.904)			(3.459)			(5.943)	
Member of the same cell			2.994			1.842			3.155			7.313
			(3.140)			(3.050)			(4.451)			(5.492)
Member of another cell			11.030***			-4.344			3.129			3.997
			(2.688)			(2.955)			(3.462)			(4.900)
Own health shock	-4.093	-3.986	-4.160	5.291	5.663	5.450	11.694	11.520	11.330	2.562	1.571	2.267
	(3.882)	(3.190)	(3.111)	(3.344)	(3.872)	(4.149)	(10.136)	(11.668)	(10.213)	(9.486)	(8.812)	(8.039)
Age	-0.778**	-0.771**	-0.784**	-0.136	-0.156	-0.132	1.909	1.921*	1.904**	-0.378	-0.405	-0.363
	(0.376)	(0.383)	(0.320)	(0.289)	(0.342)	(0.295)	(1.368)	(1.119)	(0.919)	(1.154)	(1.295)	(1.293)
Department and rural × time dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5618	5618	5618	4603	4603	4603	2304	2304	2304	2197	2197	2197
Individuals												
R-squared												
Tests of equality of coefficients (p-values)												
Household head / Non household head	0.954			0.933			0.806			0.672		
Cell head / Non cell head		0.248			0.461			0.844			0.819	
In the cell/ Not in the cell			0.047			0.111			0.997			0.605

Source: PSF surveys 2006-2011. Sample is composed of 6-58 years old individuals. Dependent variable is the number of weekly domestic hours performed by individual i at period t.
Bootstrapped standard errors in brackets.
This estimation was computed from the pantob command in Stata available here : :www.princeton.edu/~honore/stata/index.html. Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.
This estimation was

Comparable household structure

Table S9: Effect of a health shock on household members' labor supply depending on the gender, age and labor status of the ill member on comparable individuals in terms of household structure- Linear probability model with individual fixed effects

	Female			Male			Girls			Boys		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Male	0.016			-0.028			0.082**			-0.044		
	(0.024)			(0.026)			(0.035)			(0.037)		
Female	0.013			0.060***			-0.035			0.078**		
	(0.021)			(0.022)			(0.028)			(0.032)		
Child		-0.066**			-0.030			0.021			-0.014	
		(0.027)			(0.028)			(0.055)			(0.049)	
Adult		-0.018			0.045**			0.024			0.104***	
		(0.020)			(0.022)			(0.030)			(0.034)	
Worker			0.074***			-0.012			-0.005			0.039
			(0.024)			(0.023)			(0.033)			(0.038)
Not a worker			-0.023			0.066***			0.015			-0.009
			(0.025)			(0.022)			(0.035)			(0.035)
Own health shock	-0.009	-0.041	-0.030	-0.095**	-0.092**	-0.090*	-0.095	-0.089	-0.081	-0.068	-0.054	-0.128*
	(0.034)	(0.034)	(0.036)	(0.044)	(0.046)	(0.047)	(0.067)	(0.071)	(0.077)	(0.095)	(0.095)	(0.074)
Age	-0.002***	-0.002***	-0.003***	-0.005***	-0.005***	-0.005***	0.008*	0.007	0.008	-0.003	-0.003	-0.007
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)
Constant	0.473***	0.470***	0.513***	0.739***	0.751***	0.783***	0.117***	0.105***	0.117***	0.204***	0.204***	0.224***
	(0.014)	(0.014)	(0.014)	(0.012)	(0.012)	(0.011)	(0.015)	(0.016)	(0.017)	(0.018)	(0.018)	(0.019)
Department × rural × time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5290	5200	4894	4276	4154	4262	2254	2204	2008	2162	2108	1880
Individuals	2645	2600	2447	2138	2077	2131	1127	1102	1004	1081	1054	940
R-squared	0.077	0.080	0.073	0.114	0.115	0.099	0.242	0.241	0.238	0.266	0.268	0.266
Tests of equality of coefficients (p-values)												
Women / Men	0.920			0.019			0.015			0.025		
Child / Adult		0.155			0.039			0.964			0.048	
Worker / Non Worker			0.004			0.017			0.703			0.411

Source: PSF surveys 2006-2011. Sample is composed of 6-58 years old individuals.
Subsamples are individuals with comparable household structure : for (1), (4), (6) households have at least another female and another male member, for (2), (5), (7), households have at least another adult and another child, for (3), (6), (8), households have at least another worker and another non worker member.
Dependent variable is a dummy equal to 1 if individual i worked at period t.
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table S10: Effect of a health shock on household members' domestic hours depending on the gender, age and labor status of the ill member on comparable individuals in terms of household structure- Linear probability model with individual fixed effects

	Female			Male			Girls			Boys		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Male	-0.562			-0.777			2.038			-0.033		
	(2.395)			(1.395)			(1.930)			(1.304)		
Female	6.136***			-0.857			-1.038			2.002**		
	(2.191)			(1.029)			(1.817)			(0.993)		
Child		0.899			-1.324			-2.004			1.311	
		(3.242)			(1.684)			(3.343)			(1.504)	
Adult		6.916***			-1.220			0.006			1.472	
		(2.227)			(1.183)			(1.709)			(1.037)	
Worker			2.185			0.199			2.541			1.804
			(2.297)			(1.173)			(1.936)			(1.287)
Not a worker			4.509*			-1.367			-1.002			1.427
			(2.488)			(1.180)			(2.077)			(1.113)
Own health shock	-1.156	-1.735	-0.610	1.272	1.578	0.634	7.177	6.702	6.144*	3.412	3.883*	2.516
	(2.891)	(2.941)	(3.107)	(1.990)	(1.928)	(2.020)	(5.017)	(5.117)	(3.724)	(2.232)	(2.302)	(2.161)
Age	-0.432***	-0.425***	-0.464***	0.037	0.028	0.043	1.279***	1.224***	1.244***	-0.571***	-0.544***	-0.579***
	(0.062)	(0.062)	(0.060)	(0.028)	(0.029)	(0.028)	(0.292)	(0.297)	(0.313)	(0.142)	(0.149)	(0.160)
Constant	37.395***	38.131***	37.624***	8.878***	9.137***	8.867***	9.351***	9.049***	8.620***	4.704***	4.972***	5.110***
	(1.299)	(1.308)	(1.390)	(0.507)	(0.532)	(0.496)	(1.033)	(1.066)	(1.075)	(0.550)	(0.563)	(0.660)
Department × rural × time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5290	5200	4894	4276	4154	4262	2254	2204	2008	2162	2108	1880
Individuals	2645	2600	2447	2138	2077	2131	1127	1102	1004	1081	1054	940
R-squared	0.105	0.107	0.110	0.116	0.123	0.127	0.197	0.186	0.195	0.119	0.113	0.119
Tests of equality of coefficients (p-values)												
Women / Men	0.058			0.966			0.270			0.274		
Child / Adult		0.143			0.961			0.608			0.933	
Worker / Non Worker			0.534			0.389			0.247			0.837

Source: PSF surveys 2006-2011. Sample is composed of 6-58 years old individuals.
Subsamples are individuals with comparable household structure : for (1), (4), (6) households have at least another female and another male member, for (2), (5), (7), households have at least another adult and another child, for (3), (6), (8), households have at least another worker and another non worker member.
Dependent variable is a dummy equal to 1 if individual i worked at period t.
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table S11: Effect of a health shock on children's school enrollment on comparable individuals in terms of household structure - OLS model with individual fixed effects

	Girls						Boys					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
At least another shock	0.025	0.025	0.025				0.034	0.037	0.039			
	(0.033)	(0.033)	(0.033)				(0.034)	(0.034)	(0.033)			
Male				0.084*						0.021		
				(0.044)						(0.041)		
Female				-0.005						0.061*		
				(0.036)						(0.037)		
Child					-0.020						0.025	
					(0.054)						(0.073)	
Adult					-0.005						0.013	
					(0.039)						(0.034)	
Worker						0.030						0.084**
						(0.039)						(0.037)
Not a worker						0.036						0.040
						(0.045)						(0.043)
Own health shock		-0.033	-0.033	-0.047	-0.015	-0.045		-0.110	-0.094	-0.132	-0.103	-0.136
		(0.068)	(0.070)	(0.069)	(0.071)	(0.076)		(0.082)	(0.082)	(0.085)	(0.088)	(0.087)
Bad harvest			-0.045						0.053			
			(0.045)						(0.050)			
Death			0.053						0.170**			
			(0.073)						(0.078)			
Migration			-0.026						0.022			
			(0.041)						(0.047)			
Household size			-0.005*						0.006*			
			(0.003)						(0.003)			
New born child			-0.097									
			(0.073)									
Age	-0.046***	-0.046***	-0.044***	-0.048***	-0.046***	-0.043***	-0.054***	-0.054***	-0.054***	-0.053***	-0.053***	-0.054***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Constant	0.584***	0.584***	0.646***	0.580***	0.588***	0.575***	0.620***	0.620***	0.551***	0.623***	0.625***	0.629***
	(0.020)	(0.020)	(0.042)	(0.021)	(0.021)	(0.022)	(0.024)	(0.024)	(0.047)	(0.024)	(0.025)	(0.027)
Department × rural × time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Months of interview	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2304	2304	2304	2254	2204	2008	2198	2198	2198	2162	2108	1880
Individuals	1152	1152	1152	1127	1102	1004	1099	1099	1099	1081	1054	940
R-squared	0.120	0.120	0.126	0.127	0.121	0.121	0.147	0.147	0.157	0.146	0.150	0.158
Tests of equality of coefficients (p-values)												
Women / Men				0.163						0.477		
Child / Adult					0.821						0.885	
Worker / Non Worker						0.922						0.428

Source: PSF surveys 2006-2011. Sample is composed of 6-14 years old individuals. Dependent variable is a dummy equal to 1 if the child is enrolled in French/ French-Arabic school at period t.
Clustered robust standard errors at the household level in brackets.
Significance level : *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.