Wealth or Religiosity: Which One Triumphs Over Illness in Bhutan

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Abstract

The association between household wealth and health outcomes has been researched well but religiosity in explaining health outcomes is non-existent. Hence, the main objective of this study is to analyze the relationship between household wealth, religiosity and illness in Bhutan at a household level. Employing the Bhutan Living Standard Survey data of 2012, this article uses a constructed household wealth index, a religiosity dummy variable and other household covariates in establishing the relationship. Instrument variable regression is also performed to control for possible endogeneity. Findings from the Tobit regression suggest that household wealth is more likely to reduce illness while religiosity is more likely to escalate illness. Therefore, fostering economic status of the households is important to reduce illness, while people should be educated to visit health care facilities instead of confining to religious practice in solving morbidity.

Keywords: Wealth; Religiosity; Illness; Tobit; Bhutan; Instrument Variable.
JEL Classification: C21, C26, D31, I14, Z12.

1. Introduction

The study on relationship between wealth and health has made tremendous progress but there still remain avenues to explore further. Wealthy people are believed to be healthy because they are able to provide out of pocket medical expenses, live in better houses and neighbourhoods and eat healthy foods (Sightings, 2012). However, the use of wealth as a measure of socioeconomic status (SES) in health studies is limited. As outlined in Hajat, Kaufman, Rose, Siddqi, and Thomas (2010), wealth is contemplated to be a stable measure of SES compared to income because wealth reflects historical accumulation of assets over time and wealth can maintain living standards even when income is lost.

In most of the previous studies, wealth is found to have positive impact on health outcomes. Hajat et al. (2010) establishes that increase in wealth declines the incidences of obesity and smoking. They also find a positive relationship between increase in wealth and hypertension in the United States (US). Similarly, in the study by Jimenez, Correa-Velez, and Brown (2008), they find that as wealth increases, household afflicted by a major illness drops by around 5 percent in Fiji. In addition, it is observed that children from wealthier households have lower odds of dying than children from the poorer households in India (Chalasani, 2010). Psychological distress is also found to be greater in the lowest wealth quintiles in New Zealand (Carter, Blakely, Collings, Gunesekara, & Richardson, 2008).

However, there are also studies, which beg to differ in the relationship between wealth and health. Meer, Miller, and Rosen (2003) could not establish any meaningful link between wealth and health after accounting for endogeneity in the model for the US. In a study on the relationship between wealth and incidence of malaria in Tanzania, De Castro and Fisher (2012) also did not find any significant relationship between the two. Interestingly, when individuals are questioned about the health status, poor people are found less likely to believe that they are worse in health in the United Kingdom (Macintyre, McKay, & Ellaway, 2005). However, in a very similar setting, a study in Scotland and north

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of England by Davidson, Kitzinger, and Hunt (2005) finds that poor people believe in health inequalities as the consequence of difference in SES.

This study is very pertinent because Bhutan is classified as a low middle-income country (World Bank, 2012). Bhutan is a land locked country where planned development activities started only in 1961. Despite tremendous economic growth, poverty still remains a major issue. In 2012, 12 percent of the population is found living below the poverty line (National Statistics Bureau, 2012). Therefore, the first objective of this study is to empirically establish the association between wealth and illness. The study finds that increase in wealth is more likely to reduce illness in Bhutan.

In most of the countries, religion is found deeply rooted into their way of life and may determine their health outcomes as well. A Christian Science established in the US in 1879 teaches reliance on God for healing, rather than on medicine or surgery. However, the Bahá'í Faith believes in harmony between science and religion (Rumun, 2014). The common epidemiological findings on religion indicates that religious involvement promotes healing, religious people don't get sick, religious involvement promotes healing, spirituality is a protective factor, prayers heal, religion is the most important factor in health, and there is empirical evidence of a supernatural influence on health (Levin, 1996). Though, Levin (1996) refutes all the viewpoints but has not empirically tested his rebuttal.

As a unique case, this study includes religiosity in the empirical model to test its impact on illness in Bhutan. Bhutan is the last Mahayana Buddhist country in the World. There still remain some tantric forms of Buddhism where people believe in worshipping local deities. In each and every district and within districts, there can be one or more than one local deities where people worship on a daily basis (Pommaret, 2012). At times, people tend to seek divine power to heal their illness instead of visiting hospitals. Therefore, inclusion of religiosity in the study makes more stimulating to see if religiosity can actually heal the wounds. To the best knowledge of the author, no other paper has attempted to do this. Thus, the second objective of this study is to see the relationship between religiosity and illness in Bhutan. The findings from the study suggest that religiosity is likely to increases illness in the households.

The empirical analysis is carried out using Tobit model. In addition, this article uses Instrument Variable (IV) regression to account for endogeneity in the model. Further, over the years, the Principal Component Analysis (PCA) methodology as proposed by Filmer and Pritchett (2001) has become very popular in constructing wealth index in absence of income or expenditure data. However, the Standard PCA is designed for continuous variables. Since, most of the information used in constructing the wealth index is binary variables, Kolenikov and Angeles (2009) suggest an alternative approach of using Polychoric PCA. So, wealth index in the current study is obtained using the polychoric PCA.

The rest of the paper is organized as follows. In the next section, data and descriptive statistics are deliberated, followed by discussion on methodology used in section 3. Section 4 presents the preliminary findings and regression results. Finally, section 5 concludes with discussion and some policy recommendations.

2. Data and descriptive statistics

This section describes the source of data, the variables used in the study and descriptive statistics of the variables.

2.1. Data

The data for the study comes from the Bhutan Living Standard Survey (BLSS) conducted by the National Statistics Bureau in 2012. The BLSS is a representative sample of the Bhutanese population and it is conducted once in every 5 years. The BLSS follows the World Bank's Living Standard Measurement Study (LSMS) methodology. The BLSS

covered a sample of 8,969 households with 39,825 individuals. For the current study, the sample is reduced to 7,490 households because of the missing information on access to roads and hospitals. The BLSS provides wide range of information from household characteristics to household assets.

The measure of individual's health outcome is proxied by illness and it is based on the following question: "Did [Name] suffer from sickness or injury in the last four weeks?" The total count of the members sick in a household is taken into consideration. Wealth index is generated using Polychoric PCA, which is designed for binary variables (Kolenikov & Angeles, 2009). Measure of religiosity is based on the following question: "Name any two main local deities [lha, lu, tsan, tshomen, dralha, etc] your community worship and specify their sex?" A dichotomous binary variable is created. Households who have given name of even one local deities is assigned a value of one and otherwise zero.

Other covariates used in the study are mostly motivated by World Health Organization's (WHO) determinant of health. Accessibility to services like hospitals and basic health units (BHU) are considered important because it can prevent sickness or treat sickness on time (WHO, 2015). In order to capture accessibility, distance to hospital or BHU and distance to nearest road is included in the study. In concurrence with the BLSS study, distance takes a value of 1 if the time taken is less than 30 minutes to reach the nearest hospital or BHU or roads, otherwise 0. Compared to men, women are found to frequent absenteeism from work for health reasons (Broström, Johansson, & Palme, 2004). To see the gender differentials in sickness, male and female proportion of households are included in the study.

Morbidity is found to take three situations, the first one being progressive illness with aging (Vellas, Albarede, & Garry, 1992). This indicates that as one gets older, the incidence of sickness also increases. To capture the effect of age on sickness, different proportion of age categories are included in the study. Education is found to have direct as well as indirect effect on individual's health (Leigh, 1983). So, different categories of educational attainments are included in the study to see the education health effect.

Greater support from families, friends, neighbours and community is linked to a better health (WHO, 2015). Therefore, a variable named togetherness is included in the analysis to incorporate such social support network effect. The variable togetherness is obtained from a question: "How strong is the feeling of togetherness or closeness in your neighbourhood?" The options provided are very distant, somewhat distant, neither distant nor close, somewhat close and very close, which yields an ordinal variable. Social characteristics differ by the place of residence and it is found to have consequential effect on health (Zimmer, Kaneda, Tang, & Fang, 2010). So, 20 districts in Bhutan are included in the model to capture such differentials with the reference district as the capital city Thimphu. Variable definition is provided in Table A2 in the appendix.

2.2. Descriptive Statistics

Table 1: Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
Illness	0.7252	1.0704	0	9
Wealth	-0.0577	1.2824	-4.41	3.43
Male	0.5030	0.2280	0	3
Female	0.5095	0.2265	0	3
Hospital/BHU	0.7052	0.4560	0	1
Religiosity	0.7175	0.4503	0	1
Road	0.8999	0.3002	0	1
Age (15-25)	0.2033	0.2300	0	1
Age (25-35)	0.1895	0.2358	0	1
Age (35-45)	0.1181	0.1790	0	1
Age (45-55)	0.0975	0.1825	0	1
Age (55-65)	0.0700	0.1713	0	1
Age (65+)	0.0623	0.1612	0	1
No Education	0.3699	0.2991	0	1
Primary	0.2166	0.2224	0	1
Junior	0.0722	0.1354	0	1
High	0.0940	0.1673	0	1
Higher secondary	0.0793	0.1775	0	1
Degree	0.0562	0.1737	0	1
Togetherness	3.4489	1.1387	1	5

The descriptive statistics is provided in Table 1. It can be seen that the maximum sickness in a household is nine members. Wealth index is positioned between -4.41 and 3.43. Male and female ratios are almost identical at 50 percent. Around 90 percent of the households are found to have travelling distance of less than 30 minutes to reach the nearest roads. On the other hand, only around 71 percent of the households are able to reach the nearest hospital or BHU in less than 30 minutes. Almost 72 percent of the households are found to worship a local deity.

The proportion of age less than 15 years is found to be the highest at almost 26 percent compared to age above 65 years, which stands at six percent. The proportion of age category is observed to drop gradually as age increases. The proportion of uneducated people is quite high compared to having a qualification of degree and above. Around 37 percent of the people have no education at all compared to only six percent who have qualification of degree and above. Among the other education categories, there seems to be more people with primary education qualification compared to junior school, high school and higher secondary school. The feeling of togetherness or closeness in the neighbourhood stands at 3.5 indicating that the households feel somewhat close to their neighbours.

3. Methodology

To measure the effect of household wealth, religiosity and other covariates on illness in Bhutan, a Tobit regression is performed. The question on illness is by design meant to answer for the recall period of last 4 weeks. This can have too many zeros in the BLSS, which can yield a left censored dependent variable. In such a scenario, linear models may not predict the outcomes properly due to the possibility of obtaining negative fitted values. To

accommodate such problem, Tobit model is quite suitable for the analysis (Wooldrige, 2005). The standard Tobit model is specified as follows:

$$S_i^* = W_i + \alpha_2 R_i + \alpha_3 X_i + \varepsilon_i, \qquad i = 1,2,\dots,N, \tag{1a}$$

$$S_i = \begin{cases} S_i^* & if \quad S_i^* > 0 \\ 0 & if \quad S_i^* \leq 0 \end{cases} \tag{1b}$$

where, S_i^* is the latent endogenous variable representing total members ill in household i, and S_i is the corresponding actual observed number of ill people in the household i. α_1, α_2 and α_3 is a vector of parameters to be estimated. W is the wealth for the household i. R is the religiosity dichotomous variable for household i. X is a vector of explanatory variables for household i, such as distance to hospital and nearest road, sex ratios, proportion of household members in different age categories, proportion of educational attainment, togetherness and 20 district dummies. ε_i is a random error term assumed to be normally distributed and N is the number of observation. The equation (1b) shows that the observed number of illness becomes positive continuous number if only positive values are preferred, otherwise zero. Since there is no negative illness, the censoring is placed at zero in the study.

The corresponding likelihood function of the Tobit model is:

$$L = \prod_0 \left[1 - \Phi\left(\frac{\alpha Z}{\sigma}\right)\right] \prod_1 \sigma^{-1} \varphi\left[\left(S_i - \frac{\alpha Z}{\sigma}\right)\right] \tag{2}$$

where "0" indicates summation over the zero ($S_i = 0$) and "1" indicates summation over positive observations ($S_i > 0$). Φ is the standard normal distribution function and φ is the standard normal density function. α is the various parameter estimates ($\alpha_1, \alpha_2, \alpha_3$) and Z is the explanatory variables such as wealth, religiosity and other covariates.

In order to informally assess the applicability of Tobit model in the study, Wooldrige (2005) suggests carrying out a probit regression, where the binary outcome, say ω = 1 if S > 0, and ω = 0 if S = 0. If the Tobit model is applicable, the estimate $\frac{\alpha}{\sigma}$ from the Tobit model is expected to be close to probit outcomes. If the results vary significantly by way of signs and significance, it is suggested that other models such as hurdle or two-part models be estimated. The check on applicability of Tobit model is also performed and finds that Tobit model suits the present study. Greater details are provided while discussing the regression results in section 4.

A wealth index is constructed based on polychoric PCA for the reasons provided in section 1. Detailed methodology is outlined in Kolenikov and Angeles (2009, p.135-137). The variables used in constructing the wealth indices are almost identical to that of Filmer and Pritchett (2001). However, due to convergence issue, only 17 variables are used in the study. The first principal component has the maximum variance amongst the linear combination of the variables so; the first principal component is used to represent the wealth index. The first principal component explains 35.72 percent of the variation in the 17 variables used in the study.

There are very high chances of endogeneity biases in the relationship, particularly wealth is expected to be simultaneously determined by illness. In order to make sure that computed coefficients are indeed unbiased estimates measuring the net effect of household wealth on illness, Instrument Variable (IV) regression technique is employed. For the household wealth, distance to nearest markets or shops, whether households own a saving account and place of residence are chosen as the instruments. It is expected that households close to markets or shops, household who owns a saving account and household who resides in urban areas can accumulate more wealth.

Distance to markets and shops are a dichotomous variable having a value of 1 if the distance to reach the nearest markets and shops are within 30 minutes, otherwise 0. The variable on saving account is obtained from a question: "Do you or anyone in your household have savings/deposit account?" If any household members have a savings, current banking,

debit/credit/ATM cards, it takes a value of 1, otherwise 0. The place of residence is variable taking the value of 1, if the households are located in urban areas, otherwise 0.

A simple correlation analysis is performed to see the relationship between chosen instruments, wealth and sickness. As presented in Table A6 in the appendix, these three instrument variables have strong correlation with wealth but feeble association with sickness. This suggests that the instruments chosen are good predictor of wealth.

4. Results

This section details the model selection, model applicability, instrument variable model and marginal effects from the Tobit model.

4.1. Model selection

Table A4 in the appendix provides the initial Tobit regression results. In order to control for heteroscedasticity, results are generated with robust standard errors. Since education variables and age variables have identical concept in explaining the dependent variable, multicollinearity is highly suspected. If multicollinearity is present, the standard errors are high, the confidence intervals of the coefficients tend to be very wide and t-statistics very small, which causes problem in actually accepting and rejecting the null hypothesis (Wooldrige, 2005).

As suggested by Williams (2015), a pairwise correlation on the coefficients generated from the initial regression is performed. Table A5 in the appendix suggests that the correlation between age variables and education variables have very strong associations indicating the presence of multicollinearity. Possible solution to address multicollinearity is to drop these variables but again this might lead to specification bias. So, one representative variable each from age and education variable is retained in the model. Age above 65 years old is kept in model because old people are more prone to falling ill compared to other age categories. Among the education variable, primary education qualification is retained. Firstly, primary education variable is found to have minimum degree of association with other variables. Secondly, the average household member who has primary education qualification is comparatively higher compared to other education categories. Correlation between male ratio and female ratio is also observed to be very strong, so female ratio is dropped from the analysis.

Table 2. Regression Result

	Outcome variable: Illness				
Explanatory Variables	Tobit (1)	$\frac{\alpha}{\sigma}$ (2)	Probit (3)	IVTobit (4)	MFX (5)
Wealth	-0.0822***	-0.0422	-0.0451***	-0.190***	-0.0364***
	(0.025)		(0.015)	(0.055)	(0.0113)
Hospital/BHU	-0.0668	-0.0343	-0.0201	0.00889	-0.0297
	(0.065)		(0.038)	(0.074)	(0.0291)
Religiosity	0.404***	0.207	0.190***	0.387***	0.1715***
	(0.067)		(0.039)	(0.067)	(0.0272)
Road	-0.109	-0.0560	-0.0460	0.0168	-0.0492
	(0.098)		(0.057)	(0.113)	(0.0452)
Male	-0.531***	-0.2727	-0.294***	-0.550***	-0.2351***

	(0.111)		(0.066)	(0.112)	(0.0492)
Age (65+)	0.950***	0.488	0.646***	0.891***	0.4205***
	(0.146)		(0.103)	(0.149)	(0.0645)
Primary	0.640***	0.329	0.272***	0.619***	0.2833***
	(0.114)		(0.068)	(0.115)	(0.0506)
Togetherness	-0.0104	-0.0054	-0.00418	-0.0131	-0.0046
	(0.025)		(0.014)	(0.025)	(0.0110)
N	7490	7490	7490	7490	7490

Note: Robust standard errors are in the parentheses. *, **, *** denotes significance level at 10 percent, 5 percent and 1 percent respectively.
Obs. Summary: 4253 left-censored observations at sickness <= 0
3237 uncensored observations
0 right-censored observations

4.2. Model applicability

Column 1 in Table 2 provides the Tobit regression result after controlling for 8 explanatory variables along with 20 district dummies, which are not presented in the result. The σ obtained from the Tobit model is 1.947633. In column 2, the results obtained from the estimate $\frac{\alpha}{\sigma}$ is provided to compare with probit estimates, which is presented in column 3. Firstly, it can be seen that the priori signs and its significance are identical between the results obtained from Tobit and Probit model as presented in column 1 and column 3 respectively. Secondly, the estimates provided in column 2 is very consistent with the coefficients obtained in the Probit model. This suggests the applicability of Tobit model for the present study and alternative models such as double hurdle model is unwarranted.

4.3. Instrument Variable (IV) Tobit regression

Column 4 in Table 2 provides the Tobit regression results after instrumenting household wealth by whether households have a saving account or not, distance to market and shops, and place of residence. The priori signs and significance does not vary much compared to the results obtained in column 1, which is without the instruments. As indicated by the Wald test for exogeneity at χ^2 = 4.87 and probability of χ^2 = 0.0273, the null is rejected at five percent level of significance, indicating that the wealth variable is indeed exogenous in the model.

4.4. Final result

The coefficients obtained in column 1 in Table 2 are partial effects of the various explanatory variables on the latent variable S_i^*. What is more of interest is to generate the marginal effects of independent variable in explaining S_i, which provides economic meaning. Therefore, column 5 in Table 2 provides the marginal effects of final Tobit model without the instruments.

The marginal effects suggest that increase in wealth is likely to reduce illness while religiosity is likely to increase illness. A change in wealth index is likely to reduce illness by 3.64 percent whereas change in religiosity is likely to increase illness by 17.15 percent. Both the effects are found statistically significant at one percent level of significance. This finding shows that wealth is actually important in reducing the incidence of illness in Bhutan. On the other hand, having faith or worshipping local deities is found to have negative consequence on illness.

Despite the priori signs as expected, the marginal effects of distance to hospital or BHU and distance to road have insignificant impact on illness. Such results could be a positive outcome of economic development in the country. Despite remoteness of some villages in Bhutan, access to basic facilities like providing health care and connectivity to such villages are at the core of plan development activities in Bhutan (Gross National Happiness Commission, 2009). Public campaign on cleanliness, proper sanitation, good hygiene, healthy environment and physical fitness are some of the measures rigorously taken by the government to promote healthy living (Deki, 2012). So, having reaped the benefit of such move by the government, it is not surprising to see insignificant effect of such variables on illness in the country.

As expected, households with more male members are likely to have less number of illnesses and the association is found significant at one percent level of significance. Households with more members above the age of 65 and more members with primary education level is likely to have more incidences of illness. The relationship is statistically significant at one percent level of significance. Finally, WHO envisions that better health is also an outcome of good neighbours and friends. However, there is not enough evidence to prove the statement from the current study. The variable togetherness is found to have negative but insignificant association with illness in Bhutan. The coefficient produced from the regression is also negligible indicating that togetherness may not necessarily be important in reducing illness.

5. Conclusion and Recommendations

From the extent literature, it is commonly observed that wealth has the potential to improve health in the society. Despite the advantage of using wealth index as a proxy for SES, there is very limited literature that has actually used wealth index to explain health outcomes. Moreover, to the best knowledge of the author, there is not even a single paper that has incorporated religiosity in explaining health outcomes. Since, Bhutan is one of the poorest country, on top of being the last country in the world to practice tantric Mahayana Buddhism, a study on wealth, religiosity and health outcome is merited.

Employing the Bhutan Living Standard Survey data of 2012, this study determined the impact of wealth, religiosity and other covariates on illness in Bhutan. The wealth index in the study was generated using the Kolenikov and Angeles (2009) method, which is designed for binary variables. The findings from the study indicated that wealth is an important variable in explaining illness. Higher the wealth, illness is likely to reduce. On the other hand, religiosity is found to increase illness. Among other covariates, age above 65, educational attainment of primary level, male household members are found statistically significant in explaining illness in Bhutan.

Based on the findings, certain policy recommendation is proposed. First, government of Bhutan should realize that wealth is an important factor that can reduce illness in the society. So, government should not just focus on healthy living but should also provide avenues for the people to increase their household wealth.

Second, not to shun the belief in religiosity, government should propagate the idea that medicine is best to cure illness than believing in miracles. The Bhutanese proverb which can be loosely translated as, “before sickness befall, conduct rituals” should take the back sit in confronting illness. There are instances where people in the rural villages first seek the guidance of local astrologer to cure illness. It is only after prolonged illness that they visit hospitals and BHU’s. Such practices should be hugely discouraged. At this point, such practices could be due to unavailability of health personnel’s in the locality. So, government should try and provide at least one-health assistance personnel to every village. Otherwise, an alternative could be to train some local people in basic health care.

Finally, it is important to discuss some possible limitations of the article. Firstly, despite using instrument variable regression in addressing endogeneity problem, there could still be some variables that are not exogenous, which could possibly change the results. Secondly, there could be several covariates that could explain sickness but covariates in the study is mostly determined by what is available from the survey.

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Appendix

Table A3. Variable Definition

Variable	Variable definition
Illness	Proportion of household member who suffered from sickness in last 4 weeks.
Religiosity	Binary dummy variable taking the value of 1 if the households worshipped any local deity, otherwise 0.
Hospital/BHU	Binary dummy variable taking the value of 1 if the time taken by a household is less than 30 minutes to reach a hospital/Basic Health Unit (BHU).
Road	Binary dummy variable taking the value of 1 if the time taken by a household is less than 30 minutes to reach a nearest road head.
Male	Proportion of male household member.
Female	Proportion of female household member.
Age (15-25)	Proportion of household members whose age are between 15 years and above 25 years.
Age (25-35)	Proportion of household members whose age are between 25 years and above 35 years.
Age (35-45)	Proportion of household members whose age are between 35 years and above 45 years.
Age (45-55)	Proportion of household members whose age are between 45 years and above 55 years.
Age (55-65)	Proportion of household members whose age are between 55 years and above 65 years.
Age (65+)	Proportion of household members whose age are above 65 years.
No Education	Proportion of household member who has no education at all.
Primary	Proportion of household member who has at least primary school education (grade 1-6)
Junior	Proportion of household member who has at least junior school education (grade 7-8)
High	Proportion of household member who has at least high school education (grade 9-

	10)
Higher Secondary	Proportion of household member who has at least higher secondary school education (grade 11-12)
Degree	Proportion of household member who has bachelor's degree or above.
Togetherness	Ordinal variable measured on a scale of 1-5 (with 5 being very close and 1 being very distant) based on the question "How strong is the feeling of togetherness or closeness in the neighbourhood?"
Urban	Binary dummy variable taking the value of 1 if the household is from urban area.
Saving Account	Binary dummy variable taking the value of 1 if any member of the household has saving/deposit account/current banking/debit/credit/ATM card/any other account, otherwise 0.
Market/Shop	Binary dummy variable taking the value of 1 if the time taken by a household is less than 30 minutes to reach the nearest market or shops.

Table A4. Initial Tobit Regression results

Explanatory Variables	Outcome Variable: Illness
Wealth	-0.0614**
	(0.027)
Hospital/BHU	-0.0645
	(0.065)
Religiosity	0.367***
	(0.067)
Road	-0.112
	(0.098)
Male	-0.580**
	(0.250)
Female	-0.191
	(0.248)
Age (15-25)	-0.416**
	(0.190)
Age (25-35)	-0.960***
	(0.211)
Age (35-45)	-0.988***
	(0.233)
Age (45-55)	-0.442**
	(0.209)
Age (55-65)	-0.297
	(0.215)
Age (65+)	0.552**
	(0.221)
No Education	-0.735***
	(0.225)
Primary	-0.293
	(0.195)
Junior	-0.454*
	(0.255)
High	-0.779***

	(0.246)
Higher Secondary	-1.207***
	(0.249)
Degree	-1.091***
	(0.244)
Togetherness	-0.0139
	(0.025)

Note: Robust standard errors are in the parentheses. *, **, *** denotes significance level at 10 percent, 5 percent and 1 percent respectively.
Obs. Summary: 4253 left-censored observations at sickness <=0
3237 uncensored observations
0 right-censored observations.

Table A5. Correlation on Coefficients of Initial regression

	Wealth	Hospital/BHU	Religiosity	Road	Male	Fem-ale	Age (15-25)	Age (25-35)	Age (35-45)
Wealth	1.00								
Hospital/BHU	-0.21	1.00							
Religiosity	0.06	0.10	1.00						
Road	-0.26	-0.15	-0.01	1.00					
Male	0.03	0.01	-0.01	-0.03	1.00				
Female	0.00	0.01	0.01	-0.03	0.89	1.00			
Age (15-25)	0.10	0.00	0.03	-0.01	-0.01	0.03	1.00		
Age (25-35)	0.02	-0.03	0.05	0.01	-0.05	0.01	0.74	1.00	
Age (35-45)	-0.05	-0.01	0.02	0.02	-0.02	0.03	0.62	0.72	1.00
Age (45-55)	-0.05	0.00	-0.02	0.02	-0.04	0.01	0.56	0.66	0.65
Age (55-65)	-0.05	0.01	0.00	-0.03	-0.07	-0.03	0.55	0.60	0.62
Age (65+)	-0.03	0.02	-0.03	-0.02	-0.06	-0.02	0.56	0.59	0.59
No Education	0.20	0.04	-0.04	0.01	0.02	-0.01	-0.32	-0.26	-0.42
Primary	0.11	0.01	-0.03	-0.01	0.00	0.00	-0.07	-0.01	-0.19
Junior	0.02	-0.01	-0.01	-0.01	0.03	0.02	-0.27	-0.14	-0.29
High	-0.01	-0.01	-0.01	-0.01	-0.03	-0.03	-0.41	-0.28	-0.36
H/Secondary	-0.03	0.02	-0.01	0.00	-0.01	-0.02	-0.45	-0.31	-0.36
Degree	-0.03	0.01	-0.03	0.00	0.00	0.00	-0.43	-0.36	-0.40
Togetherness	0.01	0.06	-0.05	0.01	0.00	0.00	0.00	0.00	0.01

Table A5. Correlation on Coefficients of Initial regression (Contd.)

	Age (45-55)	Age (55-65)	Age (65+)	No Education	Primary	Junior	High	H/Secondary	Degree
Age (45-55)	1.00								
Age (55-65)	0.62	1.00							
Age (65+)	0.62	0.60	1.00						
No Education	-0.49	-0.51	-0.52	1.00					
Primary	-0.16	-0.13	-0.13	0.70	1.00				
Junior	-0.25	-0.23	-0.24	0.62	0.56	1.00			
High	-0.36	-0.33	-0.34	0.70	0.62	0.56	1.00		
H/Secondary	-0.37	-0.34	-0.35	0.68	0.60	0.55	0.63	1.00	
Degree	-0.41	-0.39	-0.39	0.68	0.59	0.54	0.64	0.61	1.00
Togetherness	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.03	0.00

Table A6. Pairwise Correlation Analysis

	Illness	Wealth	Saving Account	Urban	Market/ Shop
Illness	1.000				
Wealth	-0.084	1.000			
Saving Account	-0.080	0.539	1.000		
Urban	-0.126	0.535	0.480	1.000	
Market/Shop	-0.068	0.470	0.360	0.508	1.000