# Appendix

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| **Table A1** Summary statistics of additional variables | | | | | | | |
| Sample | All | | | | Rural | Urban | Rural vs Urban |
| Number of Observations | N=8,235 | | | | n=4,223 | n=4,012 |
| Variables | mean | s.d. | min/max | | mean | mean | p-value |
| **Additional information on chronic diseases** |  |  |  |  |  |  |  |
| Number of chronic diseases | 0.309 | 0.564 | 0 | 4 | 0.349 | 0.267 | 0.000 |
| 0:No chronic disease | 0.738 | 0.440 | 0 | 1 | 0.705 | 0.773 | 0.000 |
| 1:One disease | 0.219 | 0.414 | 0 | 1 | 0.247 | 0.190 | 0.000 |
| 2:Two+ diseases | 0.043 | 0.203 | 0 | 1 | 0.049 | 0.037 | 0.009 |
| *Diagnosis of first chronic disease* |  |  |  |  |  |  |  |
| 0:No chronic disease | 0.739 | 0.439 | 0 | 1 | 0.706 | 0.774 | 0.000 |
| 1:One year | 0.093 | 0.290 | 0 | 1 | 0.120 | 0.065 | 0.000 |
| 2:2-4 years | 0.090 | 0.287 | 0 | 1 | 0.099 | 0.081 | 0.003 |
| 3:5+ years | 0.077 | 0.267 | 0 | 1 | 0.075 | 0.080 | 0.399 |

Note: The p-value is calculated using either the t-test (if continuous) or the proportion test (if binary); a pre-test of equality of variance is also conducted.

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| **TableA2** Summary statistics by status of health literacy on CDP – Urban and rural samples | | | | | | |
| Sample | Urban | | | Rural | | |
| Subsamples | w/ literacy | w/o literacy |  | w/ literacy | w/o literacy |  |
| Number of observations | n=1,145 | n=2,867 |  | n=978 | n=3,245 |  |
| Variables | mean | mean | p-value | mean | mean | p-value |
| **Key variables of interest** |  |  |  |  |  |  |
| Any chronic diseases (=1) | 0.195 | 0.240 | 0.002 | 0.263 | 0.305 | 0.012 |
| Hypertension (=1) | 0.142 | 0.171 | 0.025 | 0.191 | 0.224 | 0.030 |
| Heart problems (=1) | 0.016 | 0.018 | 0.548 | 0.030 | 0.018 | 0.033 |
| Cerebrovascular disease (=1) | 0.004 | 0.006 | 0.469 | 0.006 | 0.008 | 0.496 |
| Diabetes (=1) | 0.029 | 0.048 | 0.006 | 0.051 | 0.057 | 0.460 |
| Cancer (=1) | 0.007 | 0.006 | 0.701 | 0.006 | 0.009 | 0.354 |
| Other chronic diseases (=1) | 0.030 | 0.033 | 0.577 | 0.032 | 0.042 | 0.140 |
| Health literacy on CDPa (=1) | 1.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 |
| **Demographics** |  |  |  |  |  |  |
| Region (=1 urban) | 1.000 | 1.000 | / | 0.000 | 0.000 | / |
| Has local hukou (=1) | 0.915 | 0.879 | 0.001 | 0.967 | 0.964 | 0.652 |
| Gender (=1 male) | 0.480 | 0.486 | 0.767 | 0.489 | 0.494 | 0.774 |
| Age in years | 42.888 | 47.814 | 0.000 | 48.099 | 52.486 | 0.000 |
| 1:Aged 14-44 | 0.560 | 0.394 | 0.000 | 0.335 | 0.217 | 0.000 |
| 2:Aged 45-59 | 0.308 | 0.361 | 0.001 | 0.418 | 0.429 | 0.539 |
| 3:Aged 60-71 | 0.132 | 0.244 | 0.000 | 0.246 | 0.354 | 0.000 |
| Household size | 2.909 | 2.714 | 0.000 | 2.960 | 2.852 | 0.028 |
| Annual income (1,000 yuan) | 128.060 | 91.931 | 0.000 | 80.375 | 68.429 | 0.011 |
| **Education level** |  |  |  |  |  |  |
| 1:Illiterate | 0.019 | 0.046 | 0.000 | 0.094 | 0.145 | 0.000 |
| 2:Elementary | 0.093 | 0.214 | 0.000 | 0.276 | 0.391 | 0.000 |
| 3:Middle school | 0.207 | 0.324 | 0.000 | 0.317 | 0.307 | 0.552 |
| 4:High school | 0.244 | 0.213 | 0.033 | 0.162 | 0.103 | 0.000 |
| 5:Vocational or above | 0.437 | 0.202 | 0.000 | 0.151 | 0.055 | 0.000 |
| **Occupation** |  |  |  |  |  |  |
| 1:Working in public sectors | 0.192 | 0.101 | 0.000 | 0.107 | 0.047 | 0.000 |
| 2:Farmers | 0.076 | 0.140 | 0.000 | 0.446 | 0.453 | 0.704 |
| 3:Manual labourers | 0.162 | 0.183 | 0.128 | 0.181 | 0.192 | 0.454 |
| 4:Working in private sectors | 0.318 | 0.228 | 0.000 | 0.104 | 0.090 | 0.177 |
| 5:Other | 0.252 | 0.348 | 0.000 | 0.162 | 0.218 | 0.000 |

Note: The p-value is calculated using either the t-test (if continuous) or the proportion test (if binary); a pre-test of equality of variance is also conducted. a CDP refers to chronic disease prevention.

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| **TableA3** OLS estimates on having any chronic disease - Urban sample | | | | | |
| Dep: Has any chronic disease | (1) | (2) | (3) | (4) | (5) |
| Sample | Urban | Urban | Urban | Urban | Urban |
|  |  |  |  |  |  |
| Health literacy on CDP (=1) | -0.045\*\*\* | -0.036\*\* | -0.019 | 0.023\* | 0.023\* |
|  | (0.015) | (0.015) | (0.015) | (0.014) | (0.014) |
| Gender (=1 male) |  | -0.001 |  |  | 0.003 |
|  |  | (0.013) |  |  | (0.012) |
| Annual income (log) |  | -0.018\*\*\* |  |  | -0.006\* |
|  |  | (0.004) |  |  | (0.004) |
| Household size |  | -0.021\*\*\* |  |  | -0.003 |
|  |  | (0.004) |  |  | (0.004) |
| *Occupation (Base: 1:Public sectors)* |  |  |  |  |  |
| 2:Farmers |  |  | 0.262\*\*\* |  | 0.019 |
|  |  |  | (0.026) |  | (0.028) |
| 3:Manual labourers |  |  | 0.096\*\*\* |  | 0.023 |
|  |  |  | (0.024) |  | (0.024) |
| 4:Private sectors |  |  | 0.033 |  | 0.012 |
|  |  |  | (0.022) |  | (0.021) |
| 5:Other |  |  | 0.110\*\*\* |  | -0.009 |
|  |  |  | (0.022) |  | (0.022) |
| *Age group (Base: 1:Aged 14-44)* |  |  |  |  |  |
| 2:Aged 45-59 |  |  |  | 0.209\*\*\* | 0.209\*\*\* |
|  |  |  |  | (0.015) | (0.015) |
| 3:Aged 60-71 |  |  |  | 0.406\*\*\* | 0.406\*\*\* |
|  |  |  |  | (0.020) | (0.020) |
| *Education (Base: 1:Illiterate)* |  |  |  |  |  |
| 2:Elementary |  |  |  | -0.092\*\*\* | -0.091\*\*\* |
|  |  |  |  | (0.034) | (0.034) |
| 3:Middle |  |  |  | -0.116\*\*\* | -0.112\*\*\* |
|  |  |  |  | (0.034) | (0.035) |
| 4:High school |  |  |  | -0.119\*\*\* | -0.113\*\*\* |
|  |  |  |  | (0.035) | (0.036) |
| 5:Vocational or above |  |  |  | -0.140\*\*\* | -0.129\*\*\* |
|  |  |  |  | (0.036) | (0.038) |
|  |  |  |  |  |  |
| Observations | 4,012 | 4,012 | 4,012 | 4,012 | 4,012 |
| R-squared | 0.002 | 0.014 | 0.033 | 0.168 | 0.170 |

Note: The dependent variable is a binary variable indicating the chronic disease condition of a resident living in Ningbo (=1 if has any chronic disease; =0 otherwise). Estimates on the constant are not reported. \*\*\*p<0.01, \*\* p<0.05, \* p<0.1. Standard errors in parentheses.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Table A4** OLS estimates on having any chronic disease - Rural sample | | | | | |
| Dep: Has any chronic disease | (1) | (2) | (3) | (4) | (5) |
| Sample | Rural | Rural | Rural | Rural | Rural |
| Health literacy on CDP (=1) | -0.042\*\* | -0.035\*\* | -0.032\* | 0.013 | 0.011 |
|  | (0.017) | (0.016) | (0.016) | (0.016) | (0.016) |
| Gender (=1 male) |  | 0.003 |  |  | -0.004 |
|  |  | (0.014) |  |  | (0.013) |
| Annual income (log) |  | -0.031\*\*\* |  |  | -0.016\*\*\* |
|  |  | (0.005) |  |  | (0.005) |
| Household size |  | -0.032\*\*\* |  |  | -0.007 |
|  |  | (0.005) |  |  | (0.005) |
| *Occupation (Base: 1:Public sectors)* |  |  |  |  |  |
| 2:Farmers |  |  | 0.246\*\*\* |  | 0.023 |
|  |  |  | (0.030) |  | (0.033) |
| 3:Manual labourers |  |  | 0.120\*\*\* |  | 0.025 |
|  |  |  | (0.032) |  | (0.034) |
| 4:Private sectors |  |  | 0.034 |  | 0.009 |
|  |  |  | (0.036) |  | (0.035) |
| 5:Other |  |  | 0.139\*\*\* |  | -0.006 |
|  |  |  | (0.032) |  | (0.033) |
| *Age group (Base: 1:Aged 14-44)* |  |  |  |  |  |
| 2:Aged 45-59 |  |  |  | 0.190\*\*\* | 0.184\*\*\* |
|  |  |  |  | (0.019) | (0.020) |
| 3:Aged 60-71 |  |  |  | 0.398\*\*\* | 0.385\*\*\* |
|  |  |  |  | (0.022) | (0.023) |
| *Education (Base: 1:Illiterate)* |  |  |  |  |  |
| 2:Elementary |  |  |  | -0.010 | -0.004 |
|  |  |  |  | (0.021) | (0.021) |
| 3:Middle |  |  |  | -0.063\*\*\* | -0.051\*\* |
|  |  |  |  | (0.023) | (0.024) |
| 4:High school |  |  |  | -0.060\*\* | -0.041 |
|  |  |  |  | (0.029) | (0.031) |
| 5:Vocational or above |  |  |  | -0.077\*\* | -0.051 |
|  |  |  |  | (0.034) | (0.038) |
|  |  |  |  |  |  |
| Observations | 4,223 | 4,223 | 4,223 | 4,223 | 4,223 |
| R-squared | 0.002 | 0.027 | 0.034 | 0.135 | 0.139 |

Note: The dependent variable is a binary variable indicating the chronic disease condition of a resident living in Ningbo (=1 if has any chronic disease; =0 otherwise). Estimates on the constant are not reported. \*\*\*p<0.01, \*\* p<0.05, \* p<0.1. Standard errors in parentheses.

|  |  |  |  |  |
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| **TableA5** OLS estimates on having any chronic diseases by age group - Urban sample | | | | |
| Dep: Has any chronic disease | (1) | (2) | (3) | (4) |
| Sample | All (Urban) | Aged 60-71 | Aged 45-59 | Aged 14-44 |
|  |  |  |  |  |
| Health literacy on CDP (=1) | 0.023\* | 0.078\* | 0.039 | -0.003 |
|  | (0.014) | (0.046) | (0.028) | (0.012) |
| Gender (=1 male) | 0.003 | -0.040 | -0.015 | 0.034\*\*\* |
|  | (0.012) | (0.035) | (0.024) | (0.011) |
| Annual income (log) | -0.006\* | -0.002 | 0.002 | -0.012\*\*\* |
|  | (0.004) | (0.013) | (0.008) | (0.003) |
| Household size | -0.003 | -0.012 | -0.006 | 0.002 |
|  | (0.004) | (0.014) | (0.007) | (0.004) |
| *Occupation (Base: 1:Public sectors)* |  |  |  |  |
| 2:Farmers | 0.019 | -0.084 | -0.004 | 0.120\*\*\* |
|  | (0.028) | (0.095) | (0.060) | (0.037) |
| 3:Manual labourers | 0.023 | 0.029 | -0.033 | 0.042\*\* |
|  | (0.024) | (0.099) | (0.053) | (0.019) |
| 4:Private sectors | 0.012 | -0.092 | 0.011 | 0.020 |
|  | (0.021) | (0.095) | (0.051) | (0.015) |
| 5:Other | -0.009 | -0.132 | -0.020 | 0.015 |
|  | (0.022) | (0.089) | (0.051) | (0.017) |
| *Age group (Base: 1:Aged 14-44)* |  |  |  |  |
| 2:Aged 45-59 | 0.209\*\*\* |  |  |  |
|  | (0.015) |  |  |  |
| 3:Aged 60-71 | 0.406\*\*\* |  |  |  |
|  | (0.020) |  |  |  |
| *Education (Base: 1:Illiterate)* |  |  |  |  |
| 2:Elementary | -0.091\*\*\* | -0.082 | -0.105 | -0.136 |
|  | (0.034) | (0.055) | (0.076) | (0.093) |
| 3:Middle | -0.112\*\*\* | -0.081 | -0.151\*\* | -0.209\*\* |
|  | (0.035) | (0.061) | (0.075) | (0.088) |
| 4:High school | -0.113\*\*\* | -0.102 | -0.148\* | -0.202\*\* |
|  | (0.036) | (0.080) | (0.077) | (0.088) |
| 5:Vocational or above | -0.129\*\*\* | -0.062 | -0.211\*\* | -0.195\*\* |
|  | (0.038) | (0.109) | (0.084) | (0.088) |
|  |  |  |  |  |
| Observations | 4,012 | 851 | 1,389 | 1,772 |
| R-squared | 0.170 | 0.019 | 0.008 | 0.032 |

Note: The dependent variable is a binary variable indicating the chronic disease condition of a resident living in Ningbo (=1 if has any chronic disease; =0 otherwise). Estimates on the constant are not reported. \*\*\*p<0.01, \*\* p<0.05, \* p<0.1. Standard errors in parentheses.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **TableA6** OLS estimates on having any chronic diseases by age group - Rural sample | | | | |
| Dep: Has any chronic disease | (1) | (2) | (3) | (4) |
| Sample | All (Rural) | Aged 60-71 | Aged 45-59 | Aged 14-44 |
|  |  |  |  |  |
| Health literacy on CDP (=1) | 0.011 | 0.054 | -0.005 | -0.006 |
|  | (0.016) | (0.036) | (0.025) | (0.016) |
| Gender (=1 male) | -0.004 | -0.042 | 0.010 | 0.021 |
|  | (0.013) | (0.029) | (0.021) | (0.015) |
| Annual income (log) | -0.016\*\*\* | -0.015 | -0.025\*\*\* | -0.005 |
|  | (0.005) | (0.010) | (0.008) | (0.004) |
| Household size | -0.007 | -0.007 | -0.013 | 0.001 |
|  | (0.005) | (0.008) | (0.010) | (0.004) |
| *Occupation (Base: 1:Public sectors)* |  |  |  |  |
| 2:Farmers | 0.023 | -0.074 | 0.051 | 0.034 |
|  | (0.033) | (0.100) | (0.077) | (0.029) |
| 3:Manual labourers | 0.025 | -0.040 | 0.036 | 0.018 |
|  | (0.034) | (0.107) | (0.078) | (0.026) |
| 4:Private sectors | 0.009 | -0.134 | 0.021 | 0.031 |
|  | (0.035) | (0.125) | (0.083) | (0.024) |
| 5:Other | -0.006 | -0.054 | -0.030 | 0.009 |
|  | (0.033) | (0.103) | (0.078) | (0.025) |
| *Age group (Base: 1:Aged 14-44)* |  |  |  |  |
| 2:Aged 45-59 | 0.184\*\*\* |  |  |  |
|  | (0.020) |  |  |  |
| 3:Aged 60-71 | 0.385\*\*\* |  |  |  |
|  | (0.023) |  |  |  |
| *Education (Base: 1:Illiterate)* |  |  |  |  |
| 2:Elementary | -0.004 | -0.010 | 0.037 | -0.090 |
|  | (0.021) | (0.033) | (0.039) | (0.063) |
| 3:Middle | -0.051\*\* | -0.054 | -0.015 | -0.115\* |
|  | (0.024) | (0.047) | (0.039) | (0.059) |
| 4:High school | -0.041 | 0.006 | -0.014 | -0.118\* |
|  | (0.031) | (0.095) | (0.049) | (0.060) |
| 5:Vocational or above | -0.051 | -0.133 | 0.050 | -0.128\*\* |
|  | (0.038) | (0.167) | (0.099) | (0.061) |
|  |  |  |  |  |
| Observations | 4,223 | 1,389 | 1,802 | 1,032 |
| R-squared | 0.139 | 0.010 | 0.017 | 0.014 |

Note: The dependent variable is a binary variable indicating the chronic disease condition of a resident living in Ningbo (=1 if has any chronic disease; =0 otherwise). Estimates on the constant are not reported. \*\*\*p<0.01, \*\* p<0.05, \* p<0.1. Standard errors in parentheses.

|  |  |  |  |  |
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| **Table A7** OLS estimates on having health literacy on CDP: Full results | | | | |
| Dep: Has health literacy on CDP | (1) | (2) | (3) | (4) |
| Sample | Rural | Rural | Urban | Urban |
|  |  |  |  |  |
| Any chronic diseases (=1) | 0.030\* |  | 0.010 |  |
|  | (0.018) |  | (0.015) |  |
| Duration first chronic disease: One year |  | 0.063\*\* |  | 0.089\*\*\* |
|  |  | (0.029) |  | (0.021) |
| Duration first chronic disease: 2-4 years |  | 0.025 |  | -0.017 |
|  |  | (0.026) |  | (0.022) |
| Duration first chronic disease: 5+ years |  | 0.009 |  | -0.079\*\*\* |
|  |  | (0.027) |  | (0.025) |
| Gender (=1 male) | -0.009 | -0.010 | -0.012 | -0.012 |
|  | (0.014) | (0.014) | (0.013) | (0.013) |
| Annual income (log) | 0.005 | 0.005 | -0.000 | 0.001 |
|  | (0.004) | (0.004) | (0.004) | (0.004) |
| Household size | 0.008\* | 0.008\* | -0.003 | -0.003 |
|  | (0.005) | (0.005) | (0.004) | (0.004) |
| *Occupation (Base: 1:Public sectors)* |  |  |  |  |
| 2:Farmers | -0.050 | -0.054\* | 0.002 | -0.004 |
|  | (0.032) | (0.032) | (0.032) | (0.032) |
| 3:Manual labourers | -0.044 | -0.043 | -0.048 | -0.050 |
|  | (0.027) | (0.027) | (0.033) | (0.033) |
| 4:Private sectors | -0.038 | -0.037 | -0.098\*\*\* | -0.099\*\*\* |
|  | (0.024) | (0.024) | (0.034) | (0.034) |
| 5:Other | -0.076\*\*\* | -0.077\*\*\* | -0.086\*\*\* | -0.084\*\*\* |
|  | (0.025) | (0.025) | (0.032) | (0.032) |
| Age group (Base: 1:Aged 14-44) |  |  |  |  |
| 2: Aged 45-59 | 0.002 | 0.002 | -0.013 | -0.014 |
|  | (0.018) | (0.018) | (0.019) | (0.019) |
| 3: Aged 60-71 | -0.024 | -0.019 | -0.048\*\* | -0.046\*\* |
|  | (0.024) | (0.024) | (0.023) | (0.023) |
| *Education (Base: 1:Illiterate)* |  |  |  |  |
| 2:Elementary | 0.006 | 0.010 | 0.018 | 0.022 |
|  | (0.039) | (0.039) | (0.021) | (0.021) |
| 3:Middle | 0.049 | 0.054 | 0.079\*\*\* | 0.077\*\*\* |
|  | (0.039) | (0.040) | (0.023) | (0.023) |
| 4:High school | 0.151\*\*\* | 0.156\*\*\* | 0.170\*\*\* | 0.166\*\*\* |
|  | (0.041) | (0.042) | (0.030) | (0.030) |
| 5:Vocational or above | 0.284\*\*\* | 0.289\*\*\* | 0.295\*\*\* | 0.290\*\*\* |
|  | (0.043) | (0.043) | (0.037) | (0.036) |
|  |  |  |  |  |
| Observations | 4,012 | 4,004 | 4,223 | 4,216 |
| R-squared | 0.077 | 0.078 | 0.046 | 0.053 |

Note: Dependent variable is a binary variable indicating the status of health literacy (=1 if has health literacy on CDP, =0 otherwise). Other covariates include gender, annual income, household members, occupation, age and education (and constant). Other diseases (=1) is also included in column (4), not reported to save space. Sample size differs in column (2) due to incomplete information provided by respondents on year diagnosed with the first type of disease. \*\*\*p<0.01, \*\* p<0.05, \* p<0.1. Standard errors in parentheses.

|  |  |  |  |  |  |
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| **Table A8** OLS estimates on having comorbid chronic diseases: Adding regional fixed effects - Urban sample | | | | | |
| Dep: Has a specific chronic disease | Cerebro. | Cerebro. | Heart | Diabetes | Diabetes |
|  | (1) | (2) | (3) | (4) | (5) |
| Sample | Urban | Urban | Urban | Urban | Urban |
| **Panel A: Adding Monitor points FE** |  |  |  |  |  |
| Health literacy on CDP (=1) | 0.002 | 0.001 | 0.005 | 0.002 | 0.002 |
|  | (0.003) | (0.003) | (0.005) | (0.007) | (0.007) |
| Heart problems (=1) | 0.064\*\*\* |  |  | 0.029 |  |
|  | (0.011) |  |  | (0.028) |  |
| Health literacy on CDP Heart problems (=1) | -0.074\*\*\* |  |  | -0.041 |  |
|  | (0.021) |  |  | (0.055) |  |
| Cancer |  | 0.050\*\*\* |  |  |  |
|  |  | (0.018) |  |  |  |
| Health literacy on CDP Cancer (=1) |  | -0.060\* |  |  |  |
|  |  | (0.032) |  |  |  |
| Cerebrovascular disease (=1) |  |  | 0.186\*\*\* |  | 0.085\* |
|  |  |  | (0.031) |  | (0.047) |
| Health literacy on CDP Cerebrovascular disease (=1) |  |  | -0.230\*\*\* |  | -0.153 |
|  |  |  | (0.066) |  | (0.100) |
| Monitor stations FE | Yes | Yes | Yes | Yes | Yes |
|  |  |  |  |  |  |
| Observations | 4,012 | 4,012 | 4,012 | 4,012 | 4,012 |
| R-squared | 0.019 | 0.012 | 0.033 | 0.046 | 0.046 |
| **Panel B: Adding village/community FE** |  |  |  |  |  |
| Health literacy on CDP (=1) | 0.002 | 0.001 | 0.007 | 0.002 | 0.002 |
|  | (0.003) | (0.003) | (0.005) | (0.008) | (0.008) |
| Heart problems (=1) | 0.065\*\*\* |  |  | 0.031 |  |
|  | (0.011) |  |  | (0.028) |  |
| Health literacy on CDP Heart problems (=1) | -0.076\*\*\* |  |  | -0.044 |  |
|  | (0.021) |  |  | (0.055) |  |
| Cancer |  | 0.050\*\*\* |  |  |  |
|  |  | (0.018) |  |  |  |
| Health literacy on CDP Cancer (=1) |  | -0.060\* |  |  |  |
|  |  | (0.033) |  |  |  |
| Cerebrovascular disease (=1) |  |  | 0.184\*\*\* |  | 0.080\* |
|  |  |  | (0.031) |  | (0.047) |
| Health literacy on CDP Cerebrovascular disease (=1) |  |  | -0.222\*\*\* |  | -0.165 |
|  |  |  | (0.066) |  | (0.101) |
| Village/Community FE | Yes | Yes | Yes | Yes | Yes |
|  |  |  |  |  |  |
| Observations | 4,012 | 4,012 | 4,012 | 4,012 | 4,012 |
| R-squared | 0.029 | 0.022 | 0.041 | 0.058 | 0.059 |

Note: The dependent variable is a binary indicating the specific chronic disease condition of a resident living in Ningbo, e.g. in column (1), =1 if has cerebrovascular disease =0 otherwise.Other covariates in each column include gender, annual income, household members, occupation, age, education and regional fixed effects (11 monitor points dummies in Panel A and 114 village/community dummies in Panel B). \*\*\*p<0.01, \*\* p<0.05, \* p<0.1. Standard errors in parentheses.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Table A9** Weighted least squares estimates on having comorbid chronic disease - Urban sample | | | | | |
| Dep: Has a specific chronic disease | Cerebro. | Cerebro. | Heart | Diabetes | Diabetes |
|  | (1) | (2) | (3) | (4) | (5) |
| Sample | Urban | Urban | Urban | Urban | Urban |
| Health literacy on CDP (=1) | -0.000 | -0.001 | 0.003 | -0.000 | -0.001 |
|  | (0.001) | (0.001) | (0.002) | (0.004) | (0.003) |
| Heart problems (=1) | 0.042\* |  |  | 0.051 |  |
|  | (0.022) |  |  | (0.058) |  |
| Health literacy on CDP Heart problems (=1) | -0.046\* |  |  | -0.068 |  |
|  | (0.023) |  |  | (0.077) |  |
| Cancer |  | 0.024 |  |  |  |
|  |  | (0.026) |  |  |  |
| Health literacy on CDP Cancer (=1) |  | -0.028 |  |  |  |
|  |  | (0.026) |  |  |  |
| Cerebrovascular disease (=1) |  |  | 0.105\* |  | 0.055 |
|  |  |  | (0.059) |  | (0.057) |
| Health literacy on CDP Cerebrovascular disease (=1) |  |  | -0.140\*\* |  | -0.122 |
|  |  |  | (0.054) |  | (0.072) |
|  |  |  |  |  |  |
| Observations | 4,012 | 4,012 | 4,012 | 4,012 | 4,012 |
| R-squared | 0.012 | 0.009 | 0.023 | 0.045 | 0.045 |

Note: The dependent variable is a binary indicating the specific chronic disease condition of a resident living in Ningbo (e.g. in column (1), =1 if has cerebrovascular disease =0 otherwise).Other covariates in each column include gender, annual income, household members, occupation, age and education. Sample weights applied. \*\*\*p<0.01, \*\* p<0.05, \* p<0.1. Standard errors in parentheses.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Table A10** Logit estimates on having any chronic disease - Urban sample (marginal effects) | | | | | |
| Dep: Has any chronic disease | (1) | (2) | (3) | (4) | (5) |
| Sample | Urban | Urban | Urban | Urban | Urban |
| Health literacy on CDP (=1) | -0.048\*\*\* | -0.034\*\*\* | -0.026\*\* | 0.019\* | 0.018\* |
|  | (0.011) | (0.011) | (0.011) | (0.011) | (0.011) |
| Region (=1 urban) |  | -0.063\*\*\* |  |  | 0.018\* |
|  |  | (0.010) |  |  | (0.010) |
| Gender (=1 male) |  | 0.001 |  |  | 0.001 |
|  |  | (0.010) |  |  | (0.009) |
| Annual income (log) |  | -0.020\*\*\* |  |  | -0.011\*\*\* |
|  |  | (0.003) |  |  | (0.003) |
| Household size |  | -0.039\*\*\* |  |  | -0.005 |
|  |  | (0.004) |  |  | (0.003) |
| *Occupation (Base: 1:Public sectors)* |  |  |  |  |  |
| 2:Farmers |  |  | 0.247\*\*\* |  | 0.016 |
|  |  |  | (0.016) |  | (0.023) |
| 3:Manual labourers |  |  | 0.109\*\*\* |  | 0.024 |
|  |  |  | (0.017) |  | (0.023) |
| 4:Private sectors |  |  | 0.035\*\* |  | 0.013 |
|  |  |  | (0.016) |  | (0.023) |
| 5:Other |  |  | 0.122\*\*\* |  | -0.008 |
|  |  |  | (0.016) |  | (0.022) |
| *Age group (Base: 1:Aged 14-44)* |  |  |  |  |  |
| 2:Aged 45-59 |  |  |  | 0.208\*\*\* | 0.208\*\*\* |
|  |  |  |  | (0.010) | (0.010) |
| 3:Aged 60-71 |  |  |  | 0.406\*\*\* | 0.401\*\*\* |
|  |  |  |  | (0.014) | (0.015) |
| *Education (Base: 1:Illiterate)* |  |  |  |  |  |
| 2:Elementary |  |  |  | -0.021 | -0.019 |
|  |  |  |  | (0.016) | (0.016) |
| 3:Middle |  |  |  | -0.054\*\*\* | -0.051\*\*\* |
|  |  |  |  | (0.017) | (0.018) |
| 4:High school |  |  |  | -0.051\*\* | -0.046\*\* |
|  |  |  |  | (0.020) | (0.021) |
| 5:Vocational or above |  |  |  | -0.085\*\*\* | -0.076\*\*\* |
|  |  |  |  | (0.023) | (0.026) |
|  |  |  |  |  |  |
| Observations | 8,235 | 8,235 | 8,235 | 8,235 | 8,235 |
| Pseudo R-squared | 0.00205 | 0.0242 | 0.0345 | 0.146 | 0.149 |

Note: The dependent variable is a binary indicating he chronic disease condition of a resident living in Ningbo (=1 if has any chronic disease; =0 otherwise). Average marginal effects are reported. \*\*\*p<0.01, \*\* p<0.05, \* p<0.1. Standard errors in parentheses.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Table A11** Logit estimates on having health literacy on CDP: Disease effects (marginal effects) | | | | |
| Dep: Has health literacy on CDP | (1) | (2) | (3) | (4) |
| **Panel A: Urban sample** |  |  |  |  |
| Any chronic diseases (=1) | 0.034\* |  |  |  |
|  | (0.019) |  |  |  |
| Duration first chronic disease: One year |  | 0.070\*\* |  |  |
|  |  | (0.032) |  |  |
| Duration first chronic disease: 2-4 years |  | 0.028 |  |  |
|  |  | (0.028) |  |  |
| Duration first chronic disease: 5+ years |  | 0.011 |  |  |
|  |  | (0.030) |  |  |
| One disease |  |  | -0.031 |  |
|  |  |  | (0.020) |  |
| Two+ diseases |  |  | 0.017 |  |
|  |  |  | (0.044) |  |
| hypertension (=1) |  |  |  | 0.047\*\* |
|  |  |  |  | (0.022) |
| Heart problems (=1) |  |  |  | 0.038 |
|  |  |  |  | (0.058) |
| Cerebrovascular disease (=1) |  |  |  | 0.000 |
|  |  |  |  | (0.098) |
| Diabetes (=1) |  |  |  | -0.026 |
|  |  |  |  | (0.037) |
| Cancer (=1) |  |  |  | 0.113 |
|  |  |  |  | (0.098) |
| Observations | 4,012 | 4,004 | 4,012 | 4,012 |
| R-squared | 0.0646 | 0.0653 | 0.0647 | 0.0653 |
| **Panel B: Rural Sample** |  |  |  |  |
| Any chronic diseases (=1) | 0.011 |  |  |  |
|  | (0.016) |  |  |  |
| Duration first chronic disease: One year |  | 0.093\*\*\* |  |  |
|  |  | (0.023) |  |  |
| Duration first chronic disease: 2-4 years |  | -0.020 |  |  |
|  |  | (0.022) |  |  |
| Duration first chronic disease: 5+ years |  | -0.096\*\*\* |  |  |
|  |  | (0.023) |  |  |
| One disease |  |  | -0.004 |  |
|  |  |  | (0.016) |  |
| Two+ diseases |  |  | 0.051 |  |
|  |  |  | (0.035) |  |
| hypertension (=1) |  |  |  | 0.004 |
|  |  |  |  | (0.017) |
| Heart problems (=1) |  |  |  | 0.143\*\*\* |
|  |  |  |  | (0.052) |
| Cerebrovascular disease (=1) |  |  |  | -0.026 |
|  |  |  |  | (0.072) |
| Diabetes (=1) |  |  |  | 0.022 |
|  |  |  |  | (0.031) |
| Cancer (=1) |  |  |  | -0.038 |
|  |  |  |  | (0.068) |
| Observations | 4,223 | 4,216 | 4,223 | 4,223 |
| Pseudo R-squared | 0.0403 | 0.0486 | 0.0408 | 0.0425 |

Note: Dependent variable is a binary indicating the status of health literacy (=1 if has health literacy on chronic disease prevention, =0 otherwise. Other covariates include gender, annual income, household members, occupation, age and education. Other diseases (=1) is also included in column (4), not reported to save space. Sample size differs in column (2) due to incomplete information provided by respondents on year diagnosed with the first type of disease. Average marginal effects are reported. \*\*\*p<0.01, \*\* p<0.05, \* p<0.1. Standard errors in parentheses.