**Appendix**

**Robustness Checks One:** Replacing informal care intensities (categorical variables) with log (total number of informal care hours received per month+1)

|  |  |
| --- | --- |
| **VARIABLES** | **Average marginal effects of unmet needs (standard errors)** |
| **Total** | **ADL independent a** | **ADL dependent b** |
| Log (hour+1) c | -0.023 (0.005)\*\*\* | -0.022 (0.005)\*\*\* | -0.021 (0.012) |
| Male | -0.008 (0.020) | 0.006 (0.020) | -0.036 (0.038) |
|  |  |  |  |
| Age group45-60 years old60-79 years old80 and above | Ref0.068 (0.021)\*\*\*0.027 (0.032) | Ref0.063 (0.020)\*\*\*-0.003 (0.026) | Ref0.057 (0.046)0.044 (0.067) |
| HH per capita income (per month) d<10011001-4500>4500 | Ref-0.085 (0.067)0.009 (0.056) | Ref-0.082 (0.073)0.034 (0.046) | Ref-0.034 (0.129)-0.122 (0.155) |
|  |  |  |  |
| Urban hukou | -0.069 (0.028)\*\*\* | -0.081 (0.031)\*\* | -0.080 (0.050) |
|  |  |  |  |
| Living alone | 0.040 (0.035) | -0.010 (0.033) | 0.135 (0.071)\* |
| Education attainmentNo educationElementary schoolMiddle schoolHigh school and above | Ref0.023 (0.021)-0.008 (0.036)0.094 (0.050)\* | Ref0.006 (0.021)0.009 (0.040)0.041 (0.056) | Ref0.017 (0.042)-0.047 (0.064)0.158 (0.092)\* |
|  |  |  |  |
| #ADL/IADL difficulties#ADL#IADL | 0.033 (0.007)\*\*\*0.033 (0.007)\*\*\* | -0.076 (0.008)\*\*\* | -0.005 (0.014)-0.008 (0.012) |
|  |  |  |  |
| Marital statusMarried/cohabitatedNot married | Ref0.037 (0.027) | Ref0.071 (0.028)\*\* | Ref-0.033 (0.051) |
|  |  |  |  |
| Cognitive measurement | -0.003 (0.002) | -0.002 (0.002) | -0.009 (0.004)\* |
| GDP per capita  |  |  |  |
| Low GDP (<35,001)Lower middle GDP (35001-45000)Upper middle GDP (45001-80000)High GDP (>80001) | Ref-0.050 (0.025)\*\*-0.039 (0.035)-0.046 (0.027)\* | Ref-0.003 (0.025)-0.001 (0.036)-0.014 (0.028) | Ref-0045 (0.049)-0.082 (0.066)-0.078 (0.057) |
|  |  |  |  |
| Observations | 2,263 | 1,444 | 819 |

Note: Note: a ADL independent denotes that the older people have difficulties with IADL only. b ADL dependent denotes that the older people have difficulties in either ADL only or both ADL and IADL. c log(hour+1) is the logarithmic form of total number of informal care hours received per month plus one d Household per capita income is adjusted using equivalence scale

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Appendix: Robustness Checks Two**:Replacing control variable ‘Cognitive measurement’ with ‘# words recalled’ (one component under ‘Cognitive measurement’)

|  |  |
| --- | --- |
| **VARIABLES** | **Average marginal effects of unmet needs (standard errors)** |
| **Total** | **ADL independent a** | **ADL dependent b** |
| Care intensityLow intensityMedium intensityHigh intensity | Ref-0.030 (0.024)-0.089 (0.021)\*\*\* | Ref-0.052 (0.021)\*\*-0.071 (0.019)\*\*\* | Ref0.028 (0.047)-0.071 (0.044) |
| Male | -0.010 (0.020) | 0.004 (0.020) | -0.046 (0.039) |
|  |  |  |  |
| Age group45-60 years old60-79 years old80 and above | Ref0.062 (0.022)\*\*\*0.033 (0.033) | Ref0.064 (0.010)\*\*\*0.010 (0.028) | Ref0.035 (0.048)0.027 (0.069) |
| HH per capita income (per month) c<10011001-4500>4500 | Ref-0.051 (0.068)-0.004 (0.061) | Ref-0.044 (0.073)0.039 (0.049) | Ref-0.044 (0.128)-0.020 (0.168) |
|  |  |  |  |
| Urban hukou | -0.078 (0.028)\*\*\* | -0.080 (0.031)\*\* | -0.100 (0.050)\*\* |
|  |  |  |  |
| Living alone | 0.025 (0.037) | -0.014 (0.035) | 0.105 (0.074) |
| Education attainmentNo educationElementary schoolMiddle schoolHigh school and above | Ref0.015 (0.021)-0.002 (0.036)0.097 (0.051)\* | Ref-0.003 (0.021)0.012 (0.033)0.043 (0.053) | Ref0.020 (0.042)-0.034 (0.064)0.199 (0.095)\*\* |
| #ADL/IADL difficulties#ADL#IADL | 0.033 (0.007)\*\*\*0.033 (0.007)\*\*\* | -0.069 (0.007)\*\*\* | -0.007 (0.014)-0.009 (0.012) |
|  |  |  |  |
| Marital statusMarried/cohabitatedNot married | Ref0.036 (0.028) | Ref0.066 (0.030)\*\* | Ref-0.020 (0.053) |
|  |  |  |  |
| Episodic memory (# words recalled) | -0.007 (0.005) | -0.001 (0.005) | -0.027 (0.011)\*\* |
| GDP per capita  |  |  |  |
| Low GDP (<35,001)Lower middle GDP (35001-45000)Upper middle GDP (45001-80000)High GDP (>80001) | Ref-0.048 (0.026)\*-0.024 (0.036)-0.047 (0.028)\* | Ref-0.007 (0.026)0.018 (0.036)-0.013 (0.028) | Ref-0.028 (0.050)-0.084 (0.066)-0.085 (0.052) |
|  |  |  |  |
| Observations | 2,116 | 1,333 | 783 |

Note: Note: a ADL independent denotes that the older people have difficulties with IADL only. b ADL dependent denotes that the older people have difficulties in either ADL only or both ADL and IADL. c Household per capita income is adjusted using equivalence scale

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1