# Study on global AGEing and adult health (SAGE): Food insecurity in relation to physical, cognitive, and emotional challenges among older adults

# HH McCLURE<sup>1,2</sup>, JJ SNODGRASS<sup>2</sup>, N NAIDOO<sup>3</sup>, P Kowal<sup>3,4</sup>

<sup>1</sup>Center for Equity Promotion, University of Oregon, Eugene, OR; <sup>2</sup>Department of Anthropology, University of Oregon, Eugene, OR; <sup>3</sup>SAGE, World Health Organization, Geneva, Switzerland; <sup>4</sup>Research Centre for Gender, Health and Ageing, University of Newcastle, Newcastle, Australia.

## Introduction

Food security is considered a basic measure of population well-being. Even though older adults are recognized as an age group at risk, comparatively little food security research has been conducted among aging populations (Quandt et al., 2001).

Traditionally, "food insecurity" has been defined as, "whenever the availability of nutritionally adequate and safe foods or the ability to acquire acceptable foods in socially acceptable ways is limited or uncertain" (Parker, 1991). In recent decades, researchers have broadened this definition to capture determinants of older adult food insecurity such as limited or uncertain ability to acquire food (e.g., "too hard to get to the store"), and inability to prepare, gain access to, and/or eat food that is available in the household because of functional impairments (Wolfe et al., 2003; Lee & Frongillo, 2001). Research guided by this broader perspective has now established that older adult food insecurity is linked to physical and mental health conditions that may become more prevalent with age (Sharkey et al., 2002). Further, the risks may be intensified for women, individuals with lower education and income, rural residents, and marginalized groups (e.g., ethnic/racial minorities) whose experiences of social and occupational inequities over the life course may translate into higher risk of food insecurity in older years (Kaida & Boyd, 2011). Despite these valuable insights, knowledge gaps remain as nearly all research on older adult food insecurity has been conducted in the U.S. and Canada, and Europe.

### Objective

To increase understanding of food insecurity among older adults worldwide, the current study investigated links between food insecurity and physical, cognitive, and affective well-being using data from the World Health Organization's Study on global AGEing and adult health (SAGE) conducted in the six middle income countries of China, Ghana, India, Mexico, Russia, and South Africa.

## Participants, Methods & Procedures

The present study investigates links between physical and mental health conditions and food insecurity among adult participants 60 years and older (n=20,863) in SAGE Wave 1 (2007-2010). SAGE is a longitudinal study with nationally representative samples of persons aged 50+ years in China, Ghana, India, Mexico, Russia and South Africa(Kowal et al., 2012). These countries provide a broad representation from different geographic regions of the world, different stages in the demographic, economic and health transition, and include the two most populous countries of the world.

### The SAGE website (www.who.int/healthinfo /sage) provides additional details and access to survey materials.

**Food insecurity** was appraised through two questions that asked participants how often in the last 12 months **a**) they had eaten less than they felt they should because there wasn't enough food, and **b**) were hungry but didn't eat because they couldn't afford enough food. Responses for both items were based on a 5-point Likert-type scale appraising frequency of hunger or limited food consumption (1 = every month to 4 = only 1 or 2 months to 5 = never) and were

**Comment [T1]:** HRS in the year 2000 includes: In the last two years, have you always had enough money to buy the food you need? recoded into a single dichotomous variable reflecting ever or never having experienced hunger or limiting one's food consumption. *Physical mobility* was measured through two separate items: **a**) a timed walk variable and **b**) self-reported difficulty performing household activities (both variables were included separately in final models). Three cognitive performance tests were used to create a z-scored summary variable of *cognitive function* for each participant; tests included immediate and delayed verbal recall, forward and backward digit span, and verbal fluency. *Depression* was reflected in a dichotomous variable (0 = no; 1 = yes) based on symptom reporting and algorithm to assign diagnosis based on the World Mental Health CIDI (Kessler et al., 2010).

Logistic regression was used to identify predictors of food insecurity controlling for key covariates (sex, age, stable household income, urban/rural residence, and highest level of schooling completed). Several indicators affirm the fit of nearly all country data with the model; the omnibus test for China (p = .10) raises questions as to the adequacy of model fit, which may be due to the very low rate of food insecurity reported by Chinese participants (at 1.3%). Statistical analyses were performed using SPSS 21.0.

### **Key Findings**

<u>Overall prevalence</u>. Among SAGE adults 60 years and older, 15.7% reported they ate less because of insufficient food, and 11.9% reported they experienced hunger in the past year, with both variables combined to reflect an overall prevalence of food insecurity at 15.8%. When examined separately by country, Chinese adults reported the lowest food insecurity (1.3%), with Ghanaian adults reporting the highest prevalence (41.8%). India (16.1%), Mexico (25.1%), South Africa (25.0%), and Russia (14.4%) all reported higher rates than that for a similar age cohort in the U.S. (at 12.0%; Ziliak & Gundersen, 2011). Logistic regression results (**Table 1**; significant findings = p < .01) suggest that poorer *physical mobility* increases the likelihood of food insecurity among Indian and Mexican older adults by 27.2% and 32.2%, respectively. Poorer *cognitive function* among South African adults predicted a 29.5% increase in food insecurity. In contrast, poorer cognitive function among Ghanaian adults predicted a 34.3% *decrease* in food insecurity. *Depression* increased the odds of older adult food insecurity in Ghana (489.6%) and South Africa (258.6%).

### Conclusions

Current study findings allow for comparison of older adult food insecurity prevalence in high and middle income nations. Compared to the rate of 12% older adult food insecurity in the U.S., only one nation, China, reported a lower rate, with Russian and Indian rates slightly higher than found in the U.S.

Findings indicate important country differences in predictors of older adult food insecurity. South African adults confront multiple and interrelated cognitive, emotional, and physical risks for food insecurity (confirmed in follow-on Pearson's correlations; data not shown here).

Indian and Mexican adults' food security appears related to physical mobility, with Ghanaians' food security most challenged by depression. The finding that Ghanaian older adults faced reduced food insecurity risk with lower cognitive function is surprising given prior work showing that poorer cognitive function among older adults is associated with increased food insecurity (Gao et al., 2009). Fulfillment of filial obligations may account for this finding in older Ghanaianadults (Aboderin 2005). Finally, none of the three predictor variables were associated with older adult food insecurity in China or Russia.

Findings suggest that older adults' vulnerability to food insecurity is intimately linked to country-specific cultural, social, and economic values and conditions. These may include distinct cultural meanings of aging and related elevations or demotions in the social status of aging adults, and varying senses of social obligation by families and communities and by

economic and social institutions (e.g., government services). Further, though the present study focused on depression and physical and cognitive function, results from logistic regression indicate that certain sociodemographic factors (e.g., poverty in Russia) may exert greater influence on older adult risk of food insecurity. These results suggest multiple targets of policy and public health intervention to reduce risks of older adult food insecurity in middle income nations.

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Country         Variables         B         S.E.         Sig.         Exp(B)           Age         -020         0.024         396         1.130           Age         -020         0.024         396         980           URREC         228         .333         502         1.256           SchoolR         246         .133         0.63         1.276           Depression         .975         .544         .073         2.651           Walk         -072         .115         .530         .930           DffHs         .271         .156         .294         .1191           Constant         -4253         .1394         .028         .014           Age         .002         .013         .851         1.002           URREC         .035         .183         .850         1.032           Depression         1.1774         .283         .000         .225           SchoolR         .225         .097         .002         1.343           DoffHs         .1774         .283         .000         .21343           Constant         .037         1.015         .971         1.038           SchoolR						
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India         India         India         India         India         India           India         URRCC         0.99         .203         .625         1.104           Income         1.535         .190         .000         .215           Depression        227         .223         .310         .797           Walk        057         .044         .199         .945           DffHs         .240         .081         .003         1.272           ZCognitionComposite        049         .103         .633         .952           Constant         .065         1.054         .961         1.068           Mexico         Sex        034         .152         .824         .967           Age        041         .011         .000         .960           URREC         .010         .163         .953         1.010           SchoolR        348         .080         .000         .706           Income         -1.204         .204         .000         .300           Depression         .443         .201         .028         1.557           Walk         .024         .020         .250		Δσρ	- 007	013	559	993
India         SchoolR        263         .085         .002         .769           income         -1.535         .190         .000         .215           Depression        227         .223         .310         .797           Walk        057         .044         .199         .945           DffHs         .240         .081         .003         1.272           ZCognitionComposite        049         .103         .633         .952           Constant         .065         .1.54         .951         1.068           Age        041         .011         .000         .960           URREC         .010         .163         .953         1.010           SchoolR        348         .080         .000         .706           income         -1.204         .204         .000         .300           Depression         .433         .201         .022         .1024           DffHs         .279         .067         .000         1.322           ZCognitionComposite         .011         .108         .922         .990           Constant         1.568         .588         .068         .4799 <t< td=""><td></td><td>.099</td><td>.203</td><td>.625</td><td>1.104</td></t<>			.099	.203	.625	1.104
India         Income         1.535         .190         .000         .215           Depression        227         .223         .310         .797           Walk        057         .044         .199         .945           DffHs         .240         .081         .003         1.272           ZCognitionComposite        049         .103         .633         .952           Constant         .065         1.054         .951         1.068           Sex        034         .152         .824         .967           Age         .041         .011         .000         .960           URREC         .010         .163         .953         1.010           SchoolR        348         .080         .000         .706           income         -1.204         .204         .000         .300           Depression         .443         .201         .028         1.527           Walk         .024         .020         .260         1.024           DffHs         .279         .067         .000         1.322           ZCognitionComposite         .011         .108         .922         .990		SchoolB	263	.085	.002	.769
India         Depression        227         .223         .310         .797           Walk        057         .044         .199         .945           DffHs         .240         .081         .003         1.272           ZCognitionComposite        049         .103         .633         .952           Constant         .065         1.054         .951         1.068           Age        041         .011         .000         .960           URRC         .010         .163         .953         1.010           SchoolR        348         .080         .000         .706           SchoolR        348         .024         .000         .300           Depression         .443         .201         .028         1.557           Walk         .024         .020         .250         1.024           DfHs         .279         .067         .000         1.322           ZCognitionComposite        011         .108         .922         .990           Constant         1.568         .858         .068         4.799           Sex        063         .162         .698         .939		income	-1.535	.190	.000	.215
Walk        057         .044         .199         .945           DffHs         .240         .081         .003         1.272           ZCognitionComposite        049         .103         .633         .952           Constant         .065         1.054         .951         1.068           Sex        034         .152         .824         .967           Age         .041         .011         .000         .960           URREC         .010         .163         .953         1.010           SchoolR        348         .080         .000         .300           Depression         .443         .201         .028         1.557           Walk         .024         .020         .250         1.024           DffHs         .279         .067         .000         1.322           ZCognitionComposite        011         .108         .922         .990           Constant         1.568         .858         .068         4.799           SchoolR        177         .088         .044         .837           Income         -1.413         .187         .000         .243           Depression		Depression	227	.223	.310	.797
DffHs         .240         .081         .003         1.272           ZCognitionComposite        049         .103         .633         .952           Constant         .065         1.054         .951         1.068           Sex        034         .152         .824         .967           Age         .041         .011         .000         .960           URREC         .010         .163         .953         1.010           SchoolR        348         .080         .000         .706           income         -1.204         .204         .000         .300           Depression         .443         .201         .028         1.557           Walk         .024         .020         .250         1.024           DffHs         .279         .067         .000         1.322           ZCognitionComposite        011         .108         .922         .990           Constant         1.568         .858         .068         4.799           Age        026         .012         .033         .974           URREC         .063         .162         .698         .939           Age         .		Walk	057	.044	.199	.945
ZCognitionComposite        049         .103         .633         .952           Constant         .065         1.054         .951         1.068           Sex        034         .152         .824         .967           Age         .041         .011         .000         .960           URREC         .010         .163         .953         1.010           SchoolR        348         .080         .000         .706           income         .1.204         .204         .000         .300           Depression         .443         .201         .028         1.557           Walk         .024         .020         .250         1.024           DffHs         .279         .067         .000         1.322           ZCognitionComposite         .011         .108         .922         .990           Constant         1.568         .858         .068         4.799           Age         .002         .012         .033         .974           URREC         .055         .182         .761         .946           SchoolR         .177         .088         .044         .837           income <td< td=""><td>DffHs</td><td>.240</td><td>.081</td><td>.003</td><td>1.272</td></td<>		DffHs	.240	.081	.003	1.272
Constant         .065         1.054         .951         1.068           Sex        034         .152         .824         .967           Age        041         .011         .000         .960           URREC         .010         .163         .953         1.1010           SchoolR        348         .080         .000         .706           income         -1.204         .204         .000         .300           Depression         .443         .201         .028         1.557           Walk         .024         .020         .250         1.024           DfHs         .279         .067         .000         1.322           ZCognitionComposite        011         .108         .922         .990           Constant         1.568         .858         .068         4.799           Sex        063         .162         .698         .939           Age        026         .012         .033         .974           URREC        035         .182         .761         .946           SchoolR        177         .088         .044         .837           income         -1.413 <td>ZCognitionComposite</td> <td>049</td> <td>.103</td> <td>.633</td> <td>.952</td>		ZCognitionComposite	049	.103	.633	.952
Sex        034         .152         .824         .967           Age        041         .011         .000         .960           URRC         .010         .163         .953         1.010           SchoolR        348         .080         .000         .706           income         -1.204         .204         .000         .300           Depression         .443         .201         .028         1.557           Walk         .024         .020         .250         1.024           DfHs         .279         .067         .000         1.322           ZcognitionComposite        011         .108         .922         .990           Constant         1.568         .858         .068         4.799           Sex        063         .162         .698         .939           Age        026         .012         .033         .974           URREC        055         .182         .761         .946           SchoolR        177         .088         .044         .837           Walk         .011         .008         .202         1.011           DfHs         .058         <		Constant	.065	1.054	.951	1.068
Age        041         .011         .000         .960           URREC         .010         .163         .953         1.010           SchoolR        348         .080         .000         .706           income         -1.204         .204         .000         .300           Depression         .443         .201         .028         1.557           Walk         .024         .020         .250         1.024           DffHs         .279         .067         .000         1.322           ZCognitionComposite        011         .108         .922         .990           Constant         1.568         .858         .068         .4.799           Age        026         .012         .033         .974           URREC        055         .182         .761         .946           SchoolR        177         .088         .044         .837           Income         -1.413         .187         .000         .243           Depression         1.277         .324         .000         .3586           Walk         .011         .008         .044         .837           DeffHs         .58	Mexico	Sex	034	.152	.824	.967
Mexico         URREC         .010         .163         .953         1.010           SchoolR        348         .080         .000         .706           income         -1.204         .204         .000         .300           Depression         .443         .201         .028         .1557           Walk         .024         .020         .250         1.024           DffHs         .279         .067         .000         .322           ZCognitionComposite        011         .108         .922         .990           Constant         1.568         .858         .068         4.739           Age        026         .012         .033         .974           URREC        063         .162         .698         .939           Age        026         .012         .033         .974           URREC        063         .182         .761         .946           SchoolR        177         .088         .044         .837           Income         -1.413         .187         .000         .243           Depression         1.277         .324         .000         .705           Cons		Age	041	.011	.000	.960
SchoolR        348         .080         .000         .706           income         1.204         .204         .000         .300           Depression         .443         .201         .028         1.557           Walk         .024         .020         .260         1.024           DffHs         .279         .067         .000         1.322           ZCognitionComposite        011         .108         .922         .990           Constant         1.568         .858         .068         4.799           Sex        063         .162         .688         .939           Age        026         .012         .033         .974           URREC         .055         .182         .761         .946           SchoolR        177         .088         .044         .837           income         1.413         .187         .000         .243           Depression         1.277         .324         .000         .3586           Walk         .011         .008         .022         .1011           DffHs         .058         .079         .459         1.660           ZCognitionComposite		URREC	.010	.163	.953	1.010
Income         -1.204         .204         .000         .300           Depression         .443         .201         .028         1.557           Walk         .0024         .020         .250         1.024           DffHs         .279         .067         .000         1.322           ZCognitionComposite        011         .108         .922         .990           Constant         1.568         .858         .068         4.799           Sex        063         .162         .698         .939           Age        026         .012         .033         .974           URREC        055         .182         .761         .946           SchoolR        177         .088         .044         .837           income         -1.413         .187         .000         .243           Depression         1.277         .324         .000         .3586           Walk         .011         .008         .022         1.011           DffHs         .058         .079         .459         1.060           ZcognitionComposite        349         .092         .000         .705           Constant		SchoolR	348	.080	.000	.706
Depression         .443         .201         .028         1.557           Walk         .024         .020         .250         1.024           DffHs         .279         .067         .000         1.322           ZcognitionComposite        011         1.08         .922         .990           Constant         1.568         .858         .068         4.799           Sex        063         .162         .698         .933           Age        026         .012         .033         .974           URREC        055         .182         .761         .946           SchoolR        177         .088         .044         .837           income         -1.413         .187         .000         .243           Depression         1.277         .324         .000         .3586           Walk         .011         .008         .022         1.011           DfHs         .058         .079         .459         1.060           ZcognitionComposite        349         .092         .000         .705           Constant         1.520         .910         .095         .4571           Mage		income	-1.204	.204	.000	.300
Walk         .024         .020         .250         1.024           DfHs         .279         .067         .000         1.322           ZCognitionComposite        011         108         .922         .990           Constant         1.568         .858         .068         4.799           Age        026         .012         .033         .974           URREC        055         .182         .761         .946           SchoolR        177         .088         .044         .837           Depression         1.277         .324         .000         .2586           Walk         .011         .008         .202         1.011           DfHs         .058         .079         .459         1.080           ZCognitionComposite        349         .092         .000         .705           Constant         1.520         .910         .095         .4.571           Mark         .013         .195         .504         1.139           Age         .026         .014         .055         .974           URREC         .300         .214         .162         .741           SchoolR		Depression	.443	.201	.028	1.557
DffHs         279         .067         .000         1.322           ZCognitionComposite        011         .108         .922         .990           Constant         1.568         .858         .068         4.799           Sex        063         .162         .688         .939           Age        026         .012         .033         .974           URRC        055         .182         .761         .946           SchoolR        177         .088         .0444         .837           income         -1.413         .187         .000         .243           Depression         1.277         .324         .000         .3586           Walk         .011         .008         .022         1.011           DffHs         .058         .079         .459         1.060           ZCognitionComposite        349         .092         .000         .705           Constant         1.520         .910         .095         .4571           Age        026         .014         .055         .974           URREC        300         .214         .162         .741           SchoolR		Walk	.024	.020	.250	1.024
ZCognitionComposite        011         .108         .922         .990           Constant         1.568         .858         .068         4.799           Sex        063         .162         .698         .939           Age        026         .012         .033         .974           URREC        055         .182         .761         .946           SchoolR        177         .088         .044         .837           income         1.1413         .187         .000         .243           Depression         1.277         .324         .000         .3586           Walk         .011         .008         .202         1.011           DfHs         .058         .079         .459         1.060           ZCognitionComposite        349         .092         .000         .705           Constant         1.520         .910         .095         .4571           Age        026         .014         .055         .974           URREC        300         .214         .162         .741           SchoolR        216         .095         .023         .805           income		DffHs	.279	.067	.000	1.322
Constant         1.568         .858         .068         4.799           Sex        063         .162         .689         .939           Age        026         .012         .033         .974           URREC        055         .182         .761         .946           SchoolR        177         .088         .044         .837           income         -1.413         .187         .000         .243           Depression         1.277         .324         .000         .3586           Walk         .011         .008         .022         1.011           DfHs         .058         .079         .459         1.060           ZCognitionComposite        349         .092         .000         .705           Constant         1.520         .910         .095         .4.571           Sex         .130         .195         .504         1.139           Age        026         .014         .055         .974           URREC        300         .214         .162         .741           SchoolR        216         .095         .023         .805           income         -1.810 <td>ZCognitionComposite</td> <td>011</td> <td>.108</td> <td>.922</td> <td>.990</td>		ZCognitionComposite	011	.108	.922	.990
Sex        063         .162         .698         .939           Age        026         .012         .033         .974           URREC        055         .182         .761         .946           SchoolR        177         .088         .044         .837           income         -1.413         .187         .000         .243           Depression         1.277         .324         .000         .3586           Walk         .011         .008         .202         1.011           DfHs         .058         .079         .459         1.080           ZCognitionComposite        349         .092         .000         .705           Constant         1.520         .910         .095         .4.571           Sex         .130         .195         .504         1.139           Age        026         .014         .055         .974           URREC        300         .214         .162         .741           SchoolR        216         .095         .023         .805           income         1.810         .252         .000         .164           Depression         .544 <td>Constant</td> <td>1.568</td> <td>.858</td> <td>.068</td> <td>4.799</td>		Constant	1.568	.858	.068	4.799
Age        026         .012         .033         .974           URRC        055         .182         .761         .946           SchoolR        177         .088         .044         .837           income         -1.413         .187         .000         .243           Depression         1.277         .324         .000         .3586           Walk         .011         .008         .202         1.011           DfHs         .058         .079         .459         1.060           ZCognitionComposite        349         .092         .000         .705           Constant         1.520         .910         .095         .4.571           Sex         .130         .195         .504         .139           Age        026         .014         .055         .974           URREC        300         .214         .162         .741           SchoolR        216         .095         .023         .805           income         -1.810         .252         .000         .164           Depression         .544         .238         .022         1.723           Walk         .020 <td></td> <td>Sex</td> <td>063</td> <td>.162</td> <td>.698</td> <td>.939</td>		Sex	063	.162	.698	.939
URREC        055         .182         .761         .946           SchoolR        177         .088         .044         .837           South Africa         Depression         -1.177         .324         .000         .243           Depression         1.277         .324         .000         .3586           Walk         .011         .008         .202         1.011           DffHs         .058         .079         .459         1.060           ZCognitionComposite        349         .092         .000         .705           Constant         1.520         .910         .095         4.571           Sex         .130         .195         .504         1.139           Age        026         .014         .055         .974           URREC        300         .214         .162         .741           SchoolR        216         .095         .023         .805           income         .1.810         .252         .000         .164           Depression         .544         .238         .022         1.723           Walk         .020         .012         .089         1.020		Age	026	.012	.033	.974
SchoolR        177         .088         .044         .837           income         1.1413         .187         .000         .243           Depression         1.277         .324         .000         .3586           Walk         .011         .008         .202         1.011           DfHs         .058         .079         .459         1.060           ZCognitionComposite        349         .092         .000         .705           Constant         1.520         .910         .095         .4571           Age        026         .014         .055         .974           URREC        300         .214         .162         .741           SchoolR        216         .095         .023         .805           income         1.810         .252         .000         .164           Depression         .544         .238         .022         1.723           Walk         .020         .012         .089         1.020           Defression         .544         .238         .022         1.723           Walk         .020         .012         .089         1.020           DffHs	South Africa	URREC	055	.182	.761	.946
South Africa         income         -1.413         .187         .000         .243           Depression         1.277         .324         .000         .3586           Walk         .011         .008         .202         1.011           DffHs         .058         .079         .459         1.060           ZCognitionComposite        349         .092         .000         .705           Constant         1.520         .910         .095         4.571           Sex         .130         .195         .504         1.139           Age        026         .014         .055         .974           URREC        300         .214         .162         .741           SchoolR        216         .095         .023         .805           income         1.810         .252         .000         .164           Depression         .544         .238         .022         1.723           Walk         .020         .012         .089         1.020           DffHs         .217         .092         .019         1.243           ZCognitionComposite         .108         .112         .334         .1114 <td>SchoolR</td> <td>177</td> <td>.088</td> <td>.044</td> <td>.837</td>		SchoolR	177	.088	.044	.837
Depression         1.277         .324         .000         3.586           Walk         .011         .008         .202         1.011           DffHs         .058         .079         .459         1.060           ZCognitionComposite        349         .092         .000         .705           Constant         1.520         .910         .095         .4.571           Sex         .130         .195         .504         1.139           Age        026         .014         .055         .974           URREC        300         .214         .162         .741           SchoolR        216         .095         .023         .805           income         -1.810         .252         .000         .164           Depression         .544         .238         .022         1.723           Walk         .020         .012         .089         1.020           DffHs         .217         .092         .019         1.243           ZCognitionComposite         .108         .112         .334         1.114		income	-1.413	.187	.000	.243
Walk         .011         .008         .202         1.011           DffHs         .058         .079         .459         1.060           ZCognitionComposite        349         .092         .000         .705           Constant         1.520         .910         .095         4.571           Sex         .130         .195         .504         1.139           Age        026         .014         .055         .974           URREC        300         .214         .162         .741           SchoolR        216         .095         .023         .805           income         -1.810         .252         .000         .164           Depression         .544         .238         .022         1.723           Walk         .020         .012         .089         1.243           ZCognitionComposite         .108         .112         .334         1.114		Depression	1.277	.324	.000	3.586
DtHs         .058         .079         .459         1.060           ZCognitionComposite        349         .092         .000         .705           Constant         1.520         .910         .095         4.571           Sex         .130         .195         .504         1.139           Age        026         .014         .055         .974           URREC        300         .214         .162         .741           SchoolR        216         .095         0.023         .805           income         -1.810         .252         .000         .164           Depression         .544         .238         .022         1.723           Walk         .020         .012         .089         1.020           DffHs         .217         .092         .019         1.243           ZCognitionComposite         .108         .112         .334         1.114		Walk	.011	.008	.202	1.011
ZCognitionComposite         -349         .092         .000         .705           Constant         1.520         .910         .095         4.571           Sex         .130         .195         .504         1.139           Age        026         .014         .055         .974           URREC        300         .214         .162         .741           SchoolR        216         .095         .023         .805           income         -1.810         .252         .000         .164           Depression         .544         .238         .022         1.723           Walk         .020         .012         .089         1.020           DffHs         .217         .092         .019         1.243           ZCognitionComposite         .108         .112         .334         1.114		DTTHS	.058	.079	.459	1.060
Russia         Sex         .1.520         .910         .095         4.571           Russia         Sex         .130         .195         .504         1.139           Age        026         .014         .055         .974           URREC        300         .214         .162         .741           SchoolR        216         .095         .023         .805           income         1.810         .252         .000         .164           Depression         .544         .238         .022         1.723           Walk         .020         .012         .089         1.020           DffHs         .217         .092         .019         1.243           ZCognitionComposite         .108         .112         .334         1.114		2CognitionComposite	349	.092	.000	.705
sex         .130         .195         .504         1.139           Age        026         .014         .055         .974           URREC        300         .214         .162         .741           SchoolR        216         .095         .023         .805           income         -1.810         .252         .000         .164           Depression         .544         .238         .022         1.723           Walk         .020         .012         .089         1.223           DffHs         .217         .092         .019         1.243           ZCognitionComposite         .108         .112         .334         1.114		Constant	1.520	.910	.095	4.571
Age        02b         .014         .055         .974           URREC        300         .214         .162         .741           SchoolR        216         .095         .023         .805           income         1.810         .252         .000         .164           Depression         .544         .238         .022         1.723           Walk         .020         .012         .089         1.020           DffHs         .217         .092         .019         1.243           ZCognitionComposite         .108         .112         .334         1.114	Russia	Sex	.130	.195	.504	1.139
Russia         Oracle        300         .214         .162         .741           SchoolR        216         .095         .023         .805           income         -1.810         .252         .000         .164           Depression         .544         .238         .022         .1723           Walk         .020         .012         .089         1.020           DffHs         .217         .092         .019         1.243           ZCognitionComposite         .108         .112         .334         .1114		Age	026	.014	.055	.974
Russia         Scitobility         -2.10         0.995         0.023         0.805           income         -1.810         .252         .000         .164           Depression         .544         .238         .022         .1.723           Walk         .020         .012         .089         1.020           DffHs         .217         .092         .019         1.243           ZCognitionComposite         .108         .112         .334         1.114		School R	300	.214	.102	.741
Russia         Income         1.101         1.232         0.000         1.164           Depression         .544         .238         .022         1.723           Walk         .020         .012         .089         1.020           DffHs         .217         .092         .019         1.243           ZCognitionComposite         .108         .112         .334         1.114		income	-1.810	252	.023	.605
Walk         .024         .1235         .022         1.123           Walk         .020         .012         0.89         1.020           DffHs         .217         .092         .019         1.243           ZCognitionComposite         .108         .112         .334         1.114		Depression	544	238	.000	1 723
DffHs         .217         .092         .019         1.223           ZCognitionComposite         .108         .112         .334         1.114		Walk	020	.230	089	1.020
ZCognitionComposite .108 .112 .334 1.114		DffHs	217	092	019	1 243
Constant 250 1104 004 770		7CognitionComposite	.108	.112	.334	1.114
LOUSTANT250 1.194 .834 .778		Constant	250	1.194	.834	.778

Key: URREC: urban/rural; DffHs: difficulty with household activities.