

# Caring for Older Dependent People in Low- and Middle-Income Countries- Effects of Caregiver Age upon Their Mental Health

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## Introduction

The share of the population aged 65 years or older of low- and middle-income countries (LMICs) is forecasted to double between 2019 and 2050 [1]. Along with the population ageing situation, one of the major concerns is that both care receivers and caregivers are growing older. Current demographic trends, such as decreases in household sizes, higher occurrences of divorce, and greater geographic distances between families, have limited the availability of caregivers. As the population age increases and the caregiver shortage, older caregivers of the older people are progressively becoming responsible for more caregiving duties in LMICs [2,3].

Compared with younger caregivers, the older caregivers trend to have a “double burden” due to their age which related morbidity [4-7] and less employed. The older caregivers, who are the economically inactive or financial strain, reported psychological problems [8,9]. On the other hand, it has been evident that better preparedness (perceived readiness) for caregiving role interacting with high mutuality (relationship quality), which was greater found in older spouse caregivers, buffer caregivers’ psychological distress responses to high care demands [10].

## Methods

### *Data sources and Sample*

The data was obtained from the 10/66 Dementia Research Group (DRG) baseline-phase survey. The 10/66 DRG has carried out a series of repeated cross-sectional surveys in Latin America, China, and India. The survey was conducted in all older person age 65 years or older individuals and their caregivers, residing in households of both urban and rural catchment area settings of the countries. The assessment covers a socio-demographic background, health and risk factors interview, physical examination, and a structured clinical mental state assessment. The background interview and social network assessment were administered to a main caregiver of the older persons in case the older persons had marked communication difficulties

arising from dementia, severe mental health illness, deafness or mutism. The main caregiver is defined as a person who is the main 'hands-on' or 'organisational' caregiver.

The present study focused on the older people household with care need and had a caregiver of seven countries, including Cuba, the Dominican Republic, Peru, Venezuela, Mexico, Puerto Rico, and China. Data were conducted between February 2003 and June 2009. Out of 11,717 older people households of the seven countries, there were 1,398 older people households with care need and had a caregiver. The vast majority (96.4%) were households where a main caregiver provided care for one older household member, only 3.6% were households where a main caregiver took care more than two older persons in the same household.

The final sample included 1,348 households where the caregiver provided care for one older person in the household for data analysis. In order to answer the research question: *Do older caregivers experience worse psychological morbidity and care burden compared to non-older caregivers?*, the sample households were classified into two types: (i) non-older-caregiver households (where a main caregiver of the household age 64 year or under), and (ii) older-caregiver households (where a main caregiver of the household age 65 year or over).

## **Findings**

The number of households, where an older dependent person in the household received care by an older caregiver, was broadly similar across seven countries. The households with older caregivers were fewer compared to those non-older caregiver households. Notably, in China and Puerto Rico, almost half (40.2% and 45.2%, respectively) were older-caregiver households.

### ***Multivariable analyses***

To investigate the association between caregiver age group (older vs non-older) and their mental health outcomes in terms of psychological morbidity and care burden alongside other potential covariate variables, the study conducted a binary logistic regression (Table 1).

In Model I, the unadjusted analysis, there were no significant differences in psychological morbidity and care burden between older caregivers and non-older caregivers across countries, and the pooled estimate remained unaffected.

In the adjusted analysis (Model II), adjusted for caregiver backgrounds (sex, marital status, education), older people's health status (cognitive impairment, functional dependency, behavioral problem), time spent helping with ADLs, household size, and the number of household asset there were statistically significant differences in psychological morbidity and

care burden between younger and older caregivers in all countries. The pooled estimate showed that psychological morbidity was significantly associated with caregiver age (OR=0.61, 95%CI=0.41-0.93, I<sup>2</sup>=0.0%). The older caregivers were less likely risk to psychological morbidity than non-older caregiver by 39%.

The odd ratio of the analyses on psychological morbidity in China was large compared to the six countries in Latin America, but this was not significant.

**Table 1** Unadjusted and adjusted association between older caregivers and their mental health outcomes-odd ratio (OR) and 95% confidence interval (CI)

Country	Psychological morbidity				Care burden			
	n	OR	95%CI		n	OR	95%CI	
			lower	upper			lower	upper
<b>Model I (unadjusted model)</b>								
Cuba	222	0.60	0.30	1.20	220	1.12	0.57	2.23
Dominican Republic	208	0.85	0.41	1.78	206	0.80	0.28	2.27
Peru	137	0.78	0.36	1.69	137	0.94	0.32	2.78
Venezuela	181	1.50	0.51	4.44	178	1.43	0.44	4.63
Mexico	157	0.52	0.18	1.46	156	0.43	0.05	3.52
Puerto Rico	239	0.65	0.33	1.30	239	0.38	0.12	1.22
China	204	6.21	0.68	56.55	204	0.67	0.27	1.63
<i>Pooled estimate</i>		<i>0.77</i>	<i>0.56</i>	<i>1.06</i>		<i>0.84</i>	<i>0.58</i>	<i>1.24</i>
<i>Heterogeneity I<sup>2</sup></i>		<i>3.7%</i>				<i>0.0%</i>		
<b>Model II (adjusted model)*</b>								
Cuba	208	0.48	0.20	1.14	206	1.17	0.50	2.76
Dominican Republic	175	0.82	0.33	2.05	173	1.30	0.34	4.91
Peru	134	0.45	0.14	1.41	134	0.23	0.03	1.41
Venezuela	162	1.24	0.29	5.24	159	0.72	0.09	5.49
Mexico	152	0.35	0.09	1.28	122	2.59	0.18	36.95
Puerto Rico	202	0.53	0.22	1.24	202	0.29	0.07	1.18
China	189	5.22	0.51	53.94	202	0.41	0.12	1.34
<i>Pooled estimate</i>		<b><i>0.61*</i></b>	<i>0.41</i>	<i>0.93</i>		<i>0.73</i>	<i>0.43</i>	<i>1.21</i>
<i>Heterogeneity I<sup>2</sup></i>		<i>0.0%</i>				<i>9.9%</i>		

\*Note: model II adjusted for caregiver backgrounds (sex, marital status, education), older person backgrounds (cognitive impairment, functional dependency, behavioral problem), time spent helping with ADLs, household size, number of household asset. Bold number indicates significant estimate.

## Conclusion

The number of the older people households with older caregivers is lower than the households with non-older caregiver in all countries. In comparison with some developed countries, however, the prevalence of older-caregiver households in Puerto Rico and China were higher. The main findings of this study suggested that caring responsibilities can be difficult and stressful at any age. Rather than age-related health status of the caregivers, differences in social roles and personal resources might be factors related to mental health problems of caregivers. To provide better interventions and services for caregivers, health care providers should be able to apply the findings from this study to find ways to improve services for the increasing need for caregivers of older people household in low- and middle-income countries.

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