

SOCIAL POLICY & POVERTY RESEARCH

Bulletin Volume 1, Number 3, April 2012

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AGEING AND
ECONOMIC
VULNERABILITY:

IMPLICATIONS FOR POVERTY REDUCTION PROGRAMMES

What is already known on this topic: Older persons often experience higher levels of poverty, and households with an older person as the household head have higher levels of income poverty than those with a non-older person as household head.

What this paper adds: Households with older persons are at increased risk of vulnerability to economic and other shocks and hazards. This risk increases with increased age of the older household member, and is also higher where the older person is disabled, female, or economically inactive. Whilst households with older persons have higher rates of social capital, these do not adequately compensate for higher rates of economic vulnerability, such as lack of livelihood diversity, economic dependency, and high levels of non-productive expenditure.

BACKGROUND: Globally, 1.1 million people are added to the world's ageing population (aged over 65) every month¹. There is growing concern that a lack of political will coupled with rising inequalities, changes in social values, migration and economic pressures is resulting in increasing vulnerability of older persons². In many cases, development money has resulted in erosion or destruction of traditional systems³, and 'while it is commonplace for donors to consider the effects of funding on women and the poor, similar considerations for old age are currently non-existent'⁴.

Whilst there is plentiful evidence pointing to increased individual vulnerability of older persons to disasters, economic shocks and other hazards, less is known about the influence of the presence of older persons in a household on the overall vulnerability of that household to hazards. Age-related vulnerability studies have shown differences in vulnerability between rural and

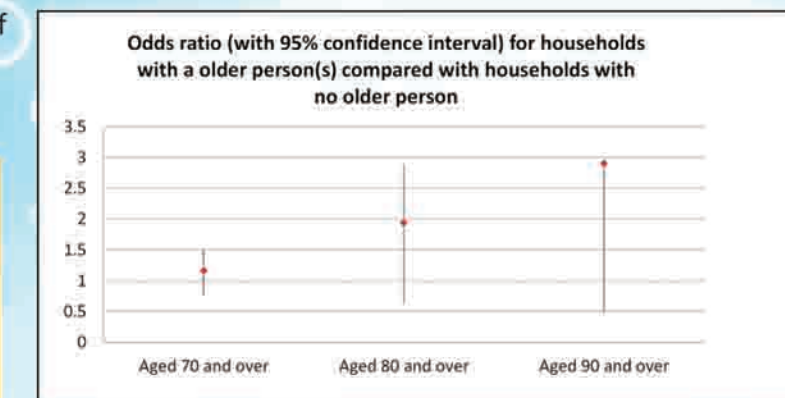
urban elderly, with older people in rural areas often experiencing higher levels of poverty and dependency⁵. Income poverty rates for rural Chinese households with a household head over 70 were nearly double those where the household head was under 70. Factors associated with reduction in economic shock for elderly-headed households include receipt of pension and increasing education status of household members. Development approaches focusing on reducing overall household vulnerability need to take into account age-related influences on vulnerability in order to implement more effective and inclusive programmes. This requires a more detailed analysis of the 'anatomy' of age-related vulnerability: specifically, in what ways does the presence of an older person contribute to, or protect against, household economic vulnerability? This approach recognizes the need to value and utilize the capacities of older persons in poverty reduction.

RESULT: from a sample of 1,194 households, 198 (16.6%) had one or more members over the age of 70, 70 (5.8%) had a member over the age of 80, and 11 (0.9%) had a member over the age of 90. In 57.5% of households with older persons, that older person was female, and amongst all households with older persons, 4% had an older person with disabilities. Older persons contributed to household income in 5.5% of all households with older persons, and in 12% of households contributed by looking after children of economically active members.

Households with an older person were at increased risk of being classified as vulnerable (Odds ratio 1.15) and this was associated with age, with the Odds ratio of vulnerability rising to 1.9 for over 80's households and 2.9 to households with a member over the age of 90.



Figure 1: Odds ratio with 95% confidence intervals for vulnerability amongst households with an older member



METHOD: This paper analyses data from a sample of 1,194 households in the central Dry Zone of Myanmar (Burma), with study population selected as a 1:4 sample from a total target population of 4,776 households as part of a baseline survey for a large-scale livelihoods intervention project funded by the Livelihood and Food Security Trust Fund (LIFT). The project area was selected in the central Dry Zone, with thirty participating villages in two townships (Ayartaw and Mahlaing) were selected based on initial poverty surveys. Data collection tools were based on the Umbrella model⁶, which draws on Moser's 'Asset vulnerability framework' to measure household economic vulnerability according to ten factors (indebtedness, productive income, livelihood diversity, dependency ratio, asset profile, water & sanitation, food security, health, social capital and decision making power), and was developed according to a livelihood and vulnerability framework developed by the Livelihood and Food Security Trust Fund (Myanmar)⁷. This model looks primarily at relative resilience of the household, as the capacity to cope with shocks and hazards, rather than relative exposure. Hence, it is best applied to determine which households are more vulnerable within a given population, rather than for absolute comparison between regions or countries. The full list of factors and linked indicators is included as Table 1.

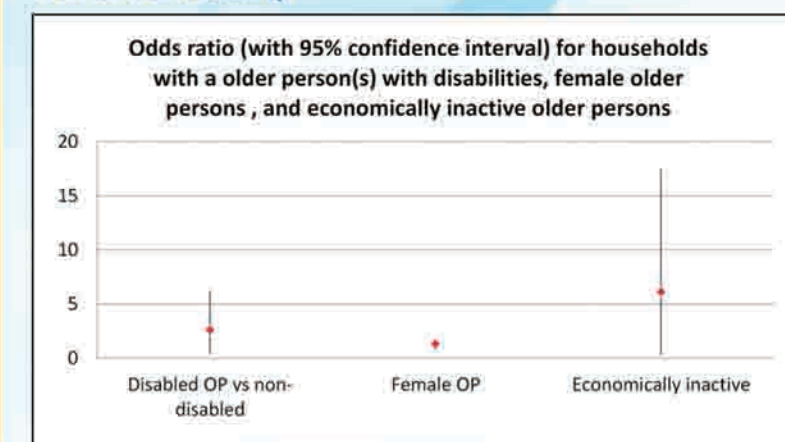
Table 1: Vulnerability factors, contributions to vulnerability, indicators and sources

Factor	Contribution to vulnerability	Indicator	Source & validation
Indebtedness	High Levels of non-productive debt put livelihood assets at risk (collateral); repayments may reduce essential expenditure; high levels of existing debt can reduce ability to access additional credit	Debt repayment as proportion of income Repayment: income ratio > 30% is usually risky	World Bank 1997 ⁸ adapted
Income	Low or negative income: expenditure ratio can lead to reduction in essential spending, increase risk of debt or negative coping responses. High proportion of income spent on non-productive items can lead to under-investment in livelihood, leading to higher risk	Proportion of income expended on non-productive items (food, health, rent, fines)	World Bank 1997 adapted
Assets	Ownership of livelihood assets, convertible assets or crucially, land (in the form of usage right) can provide short term protection against shocks.	Moser's asset vulnerability Framework, adapted for survey by Myanmar Market Research Department	Moser (1998) ⁹
Food Security	Current and prior experience of food insecurity is strongly linked with increased vulnerability to future food insecurity. Likewise, food insecurity leading to malnutrition can affect human capital, and put livelihoods at risk.	Food Security Index	UNDP ¹⁰ , modified
Livelihood diversification capacity	Income derived from a single source is more vulnerable to shocks. Multiple sources, or the potential to diversify, can increase protection against shocks affected main/key livelihoods	Livelihood diversity index (= number of income generating activities at HH)	DHS (2006) modified
Health	Chronic or frequent illness in primary earner OR one requiring care threatens livelihood security and reduces income, as well as increasing health expenditure; unplanned health expenditure is a common cause of negative coping (e.g. conversion of livelihood assets to cash)	Income generating household member days per year lost work through illness	UNDP modified
Water & Sanitation	Water is an essential for health and many livelihoods; more time taken to draw water reduces time for other activities; unsafe water sources increase risk of ill health which reduce livelihood effectiveness; unreliable water supplies increase resource expenditure	Average time to collect water	DHS (2006) ¹¹
Dependents	Household members requiring high levels of social or medical care divert human, physical and financial resources away from potentially productive livelihood activities	Household dependency scale	TLMI ¹² adapted
Social Participation	Persons with higher levels of social participation build up social capital, which can increase the likelihood of relief and assistance in times of difficulty	Participation index	TLMI, adapted from p-scale (KIT)
Decision Making	Persons with more influence in decision making can have stronger negotiating position for livelihood related factors such as fair pricing, land and asset use	Proximity to power scale	Adapted UNDP

Factors were measured using standardized indicators, which were then converted by mathematical formulas to a scale from 0-1 to allow consistent input into the vulnerability model. A household was classified as 'Vulnerable' if they had three or more of the ten factors which scored one standard deviation lower than the population mean for that factor. Older persons were defined as persons aged over 70, and persons with disabilities were defined according to National criteria for disability.

Although the relative risk decreases after correction for economic dependency, with only household members over the age of 90 remaining at significantly increased risk of vulnerability, when considering economic vulnerability factors such as debt, non-productive expenditure, livelihood diversity and assets, the likelihood vulnerability for households with older person(s) is higher than that for households without older person, with odds ratio of 1.26, 1.76 and 5.2 respectively for households with a person over the age of 70, 80 and 90. The likelihood of vulnerability was higher if the older person was female (OR 1.32) or if the older person is disabled (OR 2.6), and where the older person is economically inactive (OR 6.1).

Figure 2: Odds ratio with 95% confidence interval for risk of vulnerability



Household where the older person contributes child care was associated with an increased risk of vulnerability (OR 1.32). Higher proportions of households with household head over 70 were in the most vulnerable category for health (35% vs 26%, $p=0.08$) but conversely, smaller proportions were in the most vulnerable category for social capital (11% vs 17%, $p=0.06$). If the protective benefit of the higher rates of social capital amongst over-70 headed households is withdrawn, significant differences in overall household vulnerability emerge, with over 70 households having significantly lower overall scores than those with household head aged less than 70 (0.5076 vs 0.5244, $p=0.09$). However, the impact of social capital appears to be unevenly distributed, as removal of the protective effects of social capital had no significant impact on the proportions of households in the vulnerable category. This suggests that higher scores for social capital tend to be found in households which are not likely to have significant vulnerability in other areas.

Conclusions: the presence of older persons confers additional risk to vulnerability for the household. It appears that this increased risk is linked to economic inactivity, dependency and lack of livelihood diversity at household level. Humanitarian and development work undertaken to address poverty and economic vulnerability should take into account age related factors in programme design, and ensure that activities designed to increase participation of older persons in the economic activities of the household are included. This requires addressing issues of gender and disability as they relate to older persons and livelihood, as well as helping more vulnerable households with older persons to utilize social capital to reduce vulnerability.

Recommendations:

- Programmes need to include age-related data in baseline surveys, and be able to identify households with older persons
- Enable older persons to participate in the household income generation
- Enable increased mobility and participation for disabled older persons to participate in livelihood and social activities
- Ensure that programmes are sensitive to gender-linked vulnerability associated with female older persons
- Enable households to build and utilize social capital linked with older persons. This can be through establishment of self-help groups or support groups for older persons.

¹Kinsella K. Demographic Aspects (1996) In: Ibrahim S and Kalache A (Eds) *Epidemiology in Old Age*. London: BMJ Publishing, pp 32-40.

²Ebrahim S (2002) Ageing, Health and Society. *International Journal of Epidemiology* 31: 715-718

³Evans JG (2002) The gifts reserved for old age. *International Journal of Epidemiology*, 31: 792-5

⁴Gorman M (2002) Global Ageing: The non-governmental role in the developing world.

International Journal of Epidemiology, 31: 782-5

⁵Fang Cai, John Giles, Philip O'Keefe and Dewen Wang (2010) The Well-being of China's rural elderly and old-age support. World Bank

⁶Aung Min, Griffiths M (2011) Using the umbrella model to measure household vulnerability and facilitate 'smart' programming for livelihood vulnerability reduction. UNOPS/LIFT. Yangon

⁷Griffiths M, Woods L (2009) *Vulnerability Analysis: the Building Blocks for Successful Livelihood Intervention*. UNOPS: Yangon

⁸World Bank, 1997. *Survey of living conditions: Uttar Pradesh and Bihar. Household Questionnaire*, December 1997–March 1998.

⁹Moser C (1998) Reassessing urban poverty reduction strategies: The asset vulnerability framework. *World Development* 26, No 1, pp 1-19

¹⁰UNDP (2006) *Integrated Household Living Conditions Analysis*. Yangon: UNDP

¹¹DHS (Demographic Health Survey), 2006. *Measure DHS: model questionnaire with commentary*. Basic Documentation, Number 2.

¹²Griffiths M (2007) *Economic Vulnerability Score: applications for Community Based Rehabilitation*. Internal.

Social Policy and Poverty Research Group is a joint initiative of Action Aid Myanmar, HelpAge International (Myanmar), The Leprosy Mission Myanmar and The Department of Social Welfare.

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