



Supportive Environments for Healthy Communities

Issue 29 October 21, 2011 | Focus on Carrying Water

This issue of the *WASHplus Weekly* contains resources that discuss the health and other impacts of carrying water. Women and children are the most common water carriers. According to the USAID Global Waters newsletter, "On average, women and girls in developing countries walk 6 kilometers (approximately 3.5 miles) a day, carrying 20 liters (approximately 42 pounds/20 kgs) of water." A recent study determined that people living farther away from their water source were at a significantly increased risk of illness and emphasized the urgent need for better designed studies to determine the health impacts of carrying water far distances. Please contact WASHplus if you would like to add additional resources on this topic or if you would like to suggest a topic for future issues of the *Weekly*.

FEATURED STUDY

- **Safe Access to Safe Water in Low Income Countries: Water Fetching in Current Times**, *Social Science & Medicine* 72 (2011). S Sorenson, University of Pennsylvania. ([Full-text](#))

This study discusses gender differences in water carrying and summarizes data about water access and carrying from 44 countries. Women and children are the most common water carriers, and they spend considerable time (many trips take more than an hour) supplying water to their households. Time is but one measure of the cost of fetching water; caloric expenditures, particularly during droughts, and other measures that affect health and quality of life must be considered. The full costs of fetching water must be considered when measuring progress toward two Millennium Development Goals—increasing access to safe drinking water and seeking an end to poverty.

REPORTS/ARTICLES

- **Can India's Women Cast off the Burden of Water Carrying?** *The Guardian*, September 2, 2011. M Rahman. ([Full-text](#))

It is an age-old image of rural India: a woman trudging a long distance with a huge pot of water precariously balanced on her head. And despite an ambitious nationwide effort to provide piped water to every rural household,

it remains a common sight in most Indian villages. An American social entrepreneur is now hoping to change that, by replacing the head-borne water pot, which carries 10 liters (2.2 gallons), with a 90-liter plastic drum that can be rolled home.

- **Domestic Water Carrying and Its Implications for Health: A Review and Mixed Methods Pilot Study in Limpopo Province, South Africa**, *Environ Health*, August 2010. J Geere, University of East Anglia. ([Full-text](#))

The aims of this study were to better understand how domestic water carrying is performed, identify potential health risk factors, and gain insight into the possible health effects of the task. Water carrying was mainly performed by women or children carrying containers on their head (mean container weight 19.5 kg) over a mean distance of 337 meters. Typical water carrying methods impose physical loading with the potential to produce musculoskeletal disorders and related disability. This exploratory study is limited by a small sample size, and future research should aim to better understand the type and strength of association between water carrying and health, particularly musculoskeletal disorders. However, these preliminary findings suggest that efforts should be directed toward eliminating the need for water carrying, or where it must continue, identifying and reducing risk factors for musculoskeletal disorders and physical injury.

- **Gender and Asset Dimensions of Seasonal Water Insecurity in Urban Philippines**, 2011. L Mason, Center for Social Development. ([Full-text](#))

Seasonal water insecurity is a social and climate-related problem of growing concern in many urban areas. To advance understanding of the social dimensions of this problem, this study explores how gender and assets relate to water insecurity in the rainy and dry seasons in three urban neighborhoods in Baguio City, the Philippines. Key findings are that households manage complex water portfolios that change seasonally or more frequently; women and men have gendered roles in managing water portfolios—providing versus managing income for water purchases and physically carrying water; and particular forms of physical, financial, and social assets seem to matter for reducing seasonal water insecurity in ways that may be gendered as well.

- **How Do Children Perceive Health to be Affected by Domestic Water Carrying? Qualitative Findings from a Mixed Methods Study in Rural South Africa**, *Child Care Health Dev*, November 2010. J Geere, University of East Anglia. ([Abstract](#))

Nearly 50% of South African children lack access to clean safe water and many regularly carry water loads. The health effects of carrying water have not been well researched or considered when estimating the burden of disease due to suboptimal water supply. Children broadly conceptualize and describe health to include the functions they perform and activities in which they participate. They perceive water carrying as impacting their health in various ways, for example, making life better by

facilitating water usage, or making life worse because of accidents and pain. Children's accounts demonstrate that they can identify and explain complex interactions between activities, participation, and health.

- **Productive Time of Women and Water Supply in Ijumu, Local Government Area, Kogi State, Nigeria**, *Global Journal of Human Social Science*, September 2010. I Ifabiyi. ([Full-text](#))

This study assessed productive time of women and water supply in Nigeria. The paper concludes that water use characteristics at the household level differ from place to place and, therefore, cautions interpolating the results. The paper recommends providing more public water points in the local government area in order to improve access to water supply and create more time for productive activities in the community. The results indicate a need for further studies on water chemistry, gender, and poverty and to determine efficient distances to water points.

- **A Systematic Review and Meta-Analysis of the Association between Self-Reported Diarrheal Disease and Distance from Home to Water Source**, *Am. J. Trop. Med. Hyg.*, Sept. 2010. X Wang, University of East Anglia. ([Full-text](#))

The aim of this study was to identify whether there was a relationship between the distance that people have to carry water home and ill health. The authors conducted a systematic review of papers that reported on the association between diarrheal risk and distance. Six papers were identified for inclusion in the meta-analysis. These were all observational studies, and only two reported effect sizes that adjusted for possible confounding. Many different types of water sources supplied the study communities. The combined odds ratio showed a significant increase in illness risk in people living farther away from their water source. There is a need for better designed studies to further elucidate the health impacts of having to carry water home.

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