

17 million women/children tasked with household water collection in 24 African countries

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Nearly 17 million women and children (mostly girls) in 24 sub-Saharan African countries are responsible for hauling water long distances to their homes, a task that takes them more than 30 minutes per trip, according to a study published today in the journal *PLOS ONE*.

"The journey to collect [water](#) every day harms health, uses up limited human energy and takes time away from other opportunities," says Jay Graham, PhD, an Assistant Professor of Environmental and Occupational Health at Milken Institute School of Public Health (Milken Institute SPH) at the George Washington University. "By reducing the distance to water - preferably by having water piped to each property - many women and girls would be freed up for work, school or other activities."

Although many researchers have documented the lack of access to clean water in developing [countries](#) this study is one of the first to look at the absolute number affected and the [gender imbalance](#) in water collection labor.

Graham and his colleagues looked at data from international survey programs to calculate the number of people in 24 Sub-Saharan African countries affected by the daily grind to collect enough water for individual households. They found that among families spending more than 30 minutes a day collecting water, adult females were often tasked

with going to the local water pump or collection site.

Jugs of water easily weigh 40 pounds or more and can cause [health problems](#) - such as pressure on the skeletal system that can lead to early arthritis, Graham says. He says that people who carry water may suffer from spinal pain and be more prone to injury resulting from multiple collection trips.

Adult women were the primary collectors of water across all 24 countries studied, ranging from 46 percent in Liberia to 90 percent in Cote d'Ivoire.

Graham and his colleagues also found that when children had the water collection task it often fell to girls—62 percent versus 38 percent for boys. Health problems that affect children assigned this task include exposure to unclean water that can lead to serious diseases.

Six countries in the study had more than 100,000 households where children were reported to be primarily responsible for water collection trips that took more than 30 minutes a day. Two countries, Ethiopia and Nigeria, had more than 1 million households affected by this labor. In addition to health problems, children tasked with this job also report losing time at school.

Graham and his colleagues created a new metric that allows [public health](#) leaders to plug in numbers of females versus males to get the gender ratio of water collectors. All of the countries had gender ratios above 1, a finding which indicates that more adult women were tasked with this job. The researchers found seven countries had gender ratios that were above 10, a finding that suggests an extreme gender imbalance.

"We didn't look at the underlying reason for the gender imbalance in water collection," Graham says. "However, in some African countries

collecting water is considered a low status job and often falls to women and girls." In addition to fatigue, illness and injury - women and young girls are put at risk of sexual violence on trips to collect water, especially if they are traveling far from home or along isolated paths, Graham points out.

Graham hopes the metric will allow public health leaders in Sub-Saharan African countries to take a hard look at the gender imbalance and take steps to fix it. "Our study suggests water collection by children and [gender ratios](#) should be considered when measuring a nation's progress toward providing better access to water."

More information: The study, "An Analysis of Water Collection Labor Among Women and Children in 24 Sub-Saharan African Countries," was published online June 1 in *PLOS ONE*.

Provided by George Washington University

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