Abstract

1.8 billion people live in households that collect water from sources off household premises, creating burdens that disproportionately affect women. A current and comprehensive investigation of women's water collection experiences is needed to understand their burden of this labor. This study used mixed methods, including (a) go-along, in-depth interviews (IDIs), (b) semi-structured observation, (c) activity-tracking smart watches, and (d) scales, to (1) understand women's practices, perspectives, and experiences going to water sources; (2) determine actual water collection time, distance, caloric expenditure, total elevation ascended, weight carried, and water volume collected; and (3) assess alignment of women's estimated and actual water journey times. Ninety-four women participated across four countries: Guatemala (n = 22), Honduras (n = 17), Kenya (n = 22), Zimbabwe (n = 33). Women reported accessing various sources depending on season and needs, faced risks due to terrain and animals, and experienced physical injury and mental burden. Experiences varied within and by country. The mean water journey time (including going to the source, activities at the source, and returning) was 82 minutes (range across entire sample: 13 minutes (Guatemala) – 287 minutes (Kenya)). The mean distance traveled was 3.5km (range: 0.2km (Guatemala, Honduras, Zimbabwe) - 15.8km (Kenya)). Mean caloric expenditure was 231kcal (range: 36 (Guatemala) – 952 (Zimbabwe)). The mean volume of water collected was 16.1L. (range: 3.7L (Kenya) - 38.2L (Zimbabwe). Women also carried children, wet laundry, and other items resulting in heavy loads. The mean total weight of loads brought from water sources was 19.3 kg (range: 5.0 kg (Honduras) - 50.1 kg (Zimbabwe). Findings demonstrate how a lack of adequate and accessible water drains women of energy and time and poses risks to their well-being. Our findings reinforce the need to redouble efforts to improve water access in low-resource settings and rigorously measure the impacts of such efforts on women's lives.

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