Background: Increased attention has been paid to identifying and responding to the mental health and social emotional needs of young children in low income countries. There is lack of brief screening scales and assessment tools to characterize child mental health burden or to evaluate impact of early intervention in Sub-Saharan African (SSA) countries. This study sought to determine reliability and validity of three different parent/caregiver brief screening tools in a SSA country - Uganda. The Pediatric Symptom Checklist (14 item Pictorial Scale) (Gardner et al., 2007), assesses child behavioral problems using a pictorial format that takes into account the low literacy rates in SSA countries. The Social Competence Scale (12 items) (Gouley, et al., 2007) utilizes a strength-based evaluation approach to assess children's emotional regulation and prosocial/communication competence. The Strength and Difficult Questionnaire (SDQ; 25 items) (Goodman, et al., 1997, 2009), is available in 80 languages, focuses on psychiatric symptoms and assesses hyperactivity, emotional symptoms, peer problems and conduct problems.
Methods: Parents of 303 Ugandan 4-9 year-old children from the community were recruited and interviewed, and 103 of these who were also part of an ongoing school-based mental health intervention trial were interviewed a 2nd time (about 5 months after 1st assessment). Data from both time points were utilized to establish reliability and validity. Data from the control sample (n=42) were used for evaluating test-retest reliability. The mean age of participating parents was 35.92 years (SD = 9.80 years). About one third of parents (32%) were single, and 48% had primary or less education. Study children were an average 6.51 years old (SD = 1.08 years) and all were enrolled in Nursery to Primary 3 in Kampala, Uganda. For the purpose of validation measurement, we also included Patient Health Questionnaire (assessing parental depression; Kroenke et al., 2001; α =.83) and Parenting Stress Scale (PSI, Abidin, 1995; 5 items, α = .63).
Findings: Consistent with developers' conceptual frameworks, two factors emerged from the Pictorial Scale (Internalizing and Externalizing problems) and Social Competence Scales (Emotion regulation and Prosocial/Communication skills). However, for the SDQ scale, only one-factor emerged, with estimated 21-27% of children having abnormal level of problem behaviors. All three brief screening tools applied in this study had adequate reliability and validity. Reliability (assessed by Chronbach's alpha) ranged from .61-.68 for Pictorial scale, .61-.63 for SDQ, and .71-.87 for Social Competence Scale. All social emotional and mental health scales included were related in expected ways. The strength-based Social Competence scale is also sensitive to intervention evaluation.
Interpretation: Our findings suggest that selection of instruments needs to include parent literacy levels and cultural contexts. A strength-based measure may be more relevant than pathology-based measures in SSA context.
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The assessment of water-use behaviours after implementation of new water infrastructure at a remote Himalayan school

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Background: In 2007, the University of British Columbia's Global Health Initiative partnered with a local NGO to improve children's health at a rural north-Indian boarding school. Following a technical review identifying poor water quality and accessibility as a concern, a collaborative design project for new water infrastructure was implemented in 2013. Education on safe water use has been implemented in the school curriculum since 2008. The purpose of this study was to assess water use behaviours associated with the new infrastructure.
Methods: This study assessed water use behaviours using a mixed method approach (GPS mapping and video monitoring) to evaluate new water infrastructure usage. The movement patterns of 128 randomly selected students were assessed in relation to hand-washing and toileting over a three week study period using GPS units. Children were divided into cohorts A (grade 3-5, n = 58), B (grade 6-8, n = 29), and C (grade 9-10, n = 21) with approximately equal gender ratios. While GPS was used to discern if a child visited a hand-washing station, video provided behavioural information of their hand-washing and drinking frequency. Children were blinded to the purpose of the study to ensure their behaviours would not be affected (they were debriefed upon study completion). This study was approved by UBC's Research Ethics Board.
Findings: Children visited a hand-washing station for more than 30 seconds an average of 2.2 times during a school day. After toileting and prior to entering the kitchen, children visited a hand-washing station within five minutes 18% and 8% of the time, respectively. Cohort B had the highest hand-washing rate, at 26% post toileting and 21% before entering the kitchen, while cohort C had the lowest rate, at 11% and 0% respectively. Analysis of over 15h of video monitoring revealed that 43% of hand-washing station visits resulted in a child washing their hands and drinking water, 29% only drank water and 7% only washed. During 9% of visits children filled water bottles, and the remaining children engaged in other activities including playing and tooth-brushing. Hand-washing stations located close to classrooms received more visits (304 visits) than those farther away (10 visits). Peak usage typically occurred during school breaks.
Interpretation: While results show that children are visiting hand-washing stations, hand-washing before meals and after toileting are less than ideal, the location of hand-washing stations significantly affects their usage. These results will facilitate targeted health education around hand-washing and will guide future infrastructure development and signage with the overall goal to improve health outcomes. This multi-method approach was an effective means of assessing behavioural patterns and infrastructure usage and could have applications across multiple disciplines.
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Sesame street in the tea estates: A multi-media intervention to improve sanitation and hygiene among Bangladesh's most vulnerable youth

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Background: Children growing up in Bangladesh's Sylhet Division are some of the world's most vulnerable youth. While this region is home to over 150 lush tea estates, workers and their families living in the area's densely-populated slums lack basic resources, such as clean water and latrines. Diarrhea remains a leading cause of childhood morbidity and mortality. In Spring 2014, Sesame Workshop and its local production team Sisimpur developed a multi-media intervention to improve health and hygiene knowledge, attitudes and behaviors among children and parents living in Sylhet. A research study was