Deconstructing rural/urban and socioeconomic differentials in quality of antenatal care in Ghana

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Background: Approximately 800 women die of pregnancy-related complications every day. Over half of these deaths occur in sub-Sahara Africa (SSA). Most maternal deaths can be prevented with high quality maternal health services. That use of maternal health services varies by place of residence and socioeconomic status (SES) in SSA is well established, but few studies have examined the determinants of quality of maternal health services in SSA. The purpose of this study is to examine the determinants of antenatal care (ANC) quality in Ghana—focusing on place of residence and SES (education and wealth). The analysis examines the interactions of these variables, and the mediating role of ANC timing, frequency, facility type, and provider type.
Methods: The data come from the 2007 Ghana Maternal Health Survey, a nationally representative sample of women of reproductive age who had a birth in the five years preceding the survey. This analysis is restricted to women who went for at least one antenatal visit during their last pregnancy (N=4,868 = 97% of the analytic sample). The primary outcome measure is ANC quality, operationalized as a summative index (ranging from 0 to 9) based on services received during ANC visits. Analytic techniques include multilevel linear regression with mediation and moderation analysis. This study was granted an exemption under the University of California, Los Angeles Institutional Review Board exemption category 4 for research involving the study of existing data.
Findings: Urban residence and higher SES are positively associated with higher ANC quality (b= 0.36, 0.04, and 0.55 for urban residence compared to rural residence, years of education, and richest compared to poorest, respectively; all at $p < 0.0001$), but the urban effect is completely explained by sociodemographic factors. Specifically, about half of the urban effect is explained by education and wealth alone (p=0.0002), with other variables accounting for the remainder. The effects of education are conditional on wealth and are strongest for poorest women. Starting ANC visits early and attending the recommended four visits, as well as receiving ANC from a higher level facility such as a government hospital and from a skilled provider (doctor, nurse or midwife), are associated with higher quality ANC. These factors partially explain the SES differentials. The results are all significant at $p < 0.05$.
Interpretation: Pregnant Ghanaian women experience significant disparities in the quality of ANC, with poor illiterate women receiving the worst care. Targeted efforts to increase quality of ANC may significantly reduce maternal health disparities in Ghana and SSA. A particularly crucial step is to improve ANC quality in the lower level health facilities like health centers and health posts, where the most vulnerable women seek ANC.
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Trust in physicians and preferred providers for dance-related injury among dancers in France

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Background: Trust is an important component of the doctor-patient relationship. Patients who trust their physicians are more likely to communicate about their medical problems1, to adhere to medical advice2,3, and to be satisfied with care2,3. Trust in physicians has not been evaluated in dancers, a medically underserved athletic population. As few as 17% of U.S. dancers receive care from a physician following dance-related injury (DRI) and dancers consider doctors third-line treatment providers for DRI behind physical therapists (PTs) and dance teachers4. 1-4 References available upon request.
Methods: The purpose of this study was to describe healthcare seeking among dancers in France and to determine whether trust issues between the dancer and physician can explain the reduction in healthcare seeking behavior for DRI. The validated Trust in Physician Scale was administered to evaluate differences in trust in MDs versus PTs (scored from 7 to 100, higher values indicate more trust). Dancers additionally completed questionnaires about dance activity, injury history, and satisfaction and confidence in medical treatment for DRI. Dancers were also asked about preferred first-line treatment providers for both their self-reported most severe DRI and for a hypothetical new DRI.
Findings: Questionnaires were administered to 79 student and professional ballet and contemporary dancers in southern France (36.7% male, 63.3% female; 57.0% professional, 43.0% student; average age 24.79 ± 5.25 years old). Average weekly dance activity was 37.0 ± 18.1 hours. Dancers sustained an average of 7.64 ± 14.96 DRIs since the age they started dancing. Dancers indicated greater general trust in PTs than MDs (65.38 ±10.79 vs.70.61 ±10.57, respectively; t= -3.499, p=0.001). For a hypothetical new DRI, dancers most commonly perceived osteopaths to be their first-line providers, followed by physicians, and then PTs. Among second choice providers, physicians ranked third behind physical therapists and osteopaths. For their self-reported most severe DRI, most dancers first sought help from a physician specialist (31.6%), alternative medicine practitioner such as an acupuncturist (23.7%), or massage therapist (14.5%). Most dancers continued to dance immediately after sustaining their most severe DRI (68.4%). Additionally, most dancers did ultimately receive care from a physician for this injury (86.1%), on average within 2.5 weeks of sustaining it, and trust in physicians did not correlate with a time delay in seeking care in that instance (r=-0.18, p=0.14). Most dancers reported neutral (15.2%) or moderate satisfaction (38.0%) with the physician who treated their most severe DRI, and neutral (13.9%) or moderate (39.2%) confidence in their physician's ability to treat this injury.
Interpretation: These may results suggest that reduced trust and neutral-to-moderate confidence in physicians, as well as injury severity influence dancers' healthcare seeking behavior when injured.
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Screening early childhood social emotional and mental health functioning in a low-income country context

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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