

conducted to examine the most effective way to deliver these health communication messages.

**Methods:** A twelve week intervention occurred in Bhurbhuria, Bhararura, and Satgaon (similar communities within the Sylhet Division). Two approaches were created. The “me” approach framed messages and activities as personal, such that engaging in hygiene and sanitation behaviors would result in stronger and healthier individuals (delivered in Bhurbhuria). The “we” approach addressed hygiene and sanitation behaviors as community and social endeavors (Bhararura). Participants from Satgaon served as a control. Immediately before and after the intervention, 240 children (ages 3 to 8 years) and one of their parents completed one-on-one interviews. Active consent was used and the University of Maryland’s IRB evaluated and approved the study protocols and instruments.

**Findings:** The interventions resulted in improvements in terms of hygiene and sanitation. Those receiving the “me” approach had stronger and statistically significant gains compared to those receiving the “we” approach for: Reported latrine use (based on child reports); “all of the time” hand-washing after defecation (parent reports); better understanding of tippy taps (parent reports); awareness of Sisimpur characters (child reports); and identifying behaviors depicted in the intervention materials (child reports). In contrast, members of the “we” approach did better than “me” approach for: Favorable attitudes of sanitation and hygiene behaviors (child reports); using an improved ventilated pit latrine at home (child reports); wearing shoes “all the time” (child reports); and using a tippy tap (child reports).

**Interpretation:** The Sisimpur interventions led to positive changes in hygiene and sanitation knowledge, attitudes and behaviors; multi-media approaches improved latrine use, shoe-wearing and hand-washing among young children from Sylhet. Because gains occurred with both approaches, the “we” approach was better as most participants felt the interventions’ goals were to improve health and behaviors of all children in the community. While there were challenges and it is unknown how long the interventions’ impact will last, this work suggests that a hygiene and sanitation intervention can lead to improved outcomes with an extremely vulnerable population.

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**Abstract #:** 01SEDH005

### The importance of academic-NGO partnerships in short term medical trips: Results from a health resource needs assessment

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**Program/Project Purpose:** An isolated rural community in the Blue Mountains of Jamaica, Hagley Gap receives minimal support from government, has limited access to health care services, low literacy and poor water quality. For ten years, the Blue Mountain Project (BMP) has partnered with the community to address these challenges, and, through short-term medical trips, has been able to provide primary health care services to persons who may otherwise go untreated. Utilizing a newly developed academic-NGO partnership, this health resource and needs assessment (HRNA) identified health needs in the community and suggests programs and resources to improve health service delivery.

**Structure/Method/Design:** The HRNA was guided by the principles of the Community Oriented Primary Care model, first described

and performed by Sidney and Emily Kark. The goals were to characterize the community and identify community health problems. Survey and interview questions were developed using health census data and an existing retrospective health study of Hagley Gap. A combined total of 96 surveys and interviews were conducted over two weeks. Two questionnaire types were administered: patient/individual surveys and key stakeholder interviews. Patient/individual surveys were given to patients  $\geq 18$  years during clinic hours and home visits. Surveys included five general sections: family structure, housing structure, work status, health status, and social capital. Key stakeholder interviews were conducted with NGO staff and community leaders. Questions were tailored toward the interviewees’ perception of the organization and its role in improving the health of the community. Questionnaires received IRB exemption from the University of Cincinnati.

**Outcomes & Evaluation:** Results provided information on the health status of the community and strengths and weaknesses of current health services. While providing basic health care services is an advantage, results indicate that the limited scope of practice of BMP clinic staff limits its ability to reach the target population. Results also suggest that respondents have inconsistent expectations that do not align with the NGO’s mission and goals. Finally, results indicate that health-care services rely heavily on volunteer groups, as the clinic is most used during short-term medical visits. During gaps in medical visits, residents remain vulnerable to social and environmental circumstance, specifically, limited or no access to health services.

**Going Forward:** This HRNA is an example of the benefits of an academic-NGO partnership. Partnering with academic institutions could provide regular short-term medical visits to maintain and increase health services, and reduce the impact of gaps in care. Additional benefits include capacity building by providing clinic staff with training and skills, and the resources needed to expand health services. While these findings may be generalizable to other small NGOs operating in rural middle-income countries, further study is needed to implement these changes and evaluate their effectiveness in Hagley Gap.

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### Behavioral health policies: Do they influence behavioral practices and health outcomes among adolescent girls in low and middle income countries?

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**Background:** Physical inactivity and low consumption of fruits and vegetables during adolescence may persist through adulthood, putting adolescents at risk of developing chronic diseases. Although several studies have examined health behaviors during adolescence, few have examined the role that behavioral health policies play on consumption of fruits and vegetables and physical activity, particularly among girls in low and middle income countries (LMICs).

**Methods:** In this study, we examined the consumption of fruits and vegetables and physical activity behavior among adolescent girls in LMICs with and without fruit and vegetable and physical activity policies. Country selection (n=45) was based on availability of Global School-Based Student Health Survey (GSHS) data. Information on health policies was obtained from the World Health Organization (WHO) and from a systematic review of literature on health policies. The total analytic sample was 67,583 adolescent girls aged 11-16 from 45 countries.

**Findings:** Across all countries, variations were found in pre-established WHO definitions of adequate fruit consumption ( $\geq 2$  servings daily), vegetables consumption ( $\geq 3$  servings daily), fruits and vegetables consumption (5 servings of 2 fruits & 3 vegetables) and physical activity behavior (60 minutes daily) among adolescent girls. In most countries (35 out of 45) less than 50% of girls consumed 2 or more fruits per day. Vegetable consumption was consistently lower; in all countries less than 50% consumed 3 servings daily. Morocco had the highest percentage of girls (32.3%) consuming 5 servings of fruits and vegetables daily. Compared to adequate consumption of fruits and vegetable, the percentage of girls engaging in adequate daily physical activity was much lower. Country with the highest percentage of girls being active at least 60 minutes/day was India (28.4%). Using logistic regression models, we found a significant positive association between presence of any policy and adequate consumption of fruits {Adjusted Odds Ratio (AOR) = 1.47; 95%CI (1.41 – 1.53); p-value = 0.00}; adequate consumption of vegetables {AOR = 1.76; 95%CI (1.68 – 1.85); p-value = 0.00}; adequate consumption of fruits and vegetables {AOR = 1.84; 95%CI (1.73 – 1.96); p-value = 0.00} and adequate daily physical activity {AOR = 1.25; 95%CI (1.18 – 1.33); p-value = 0.00}. Among regions demarcated by the World Bank, the presence of fruit and vegetable policies had a positive impact on girls in Sub-Sahara Africa (SSA), the Middle East and North Africa and South Asia. Physical activity policy had a positive impact in SSA and South Asia.

**Interpretation:** This study shows that the presence of health policies provide a supportive environment for adolescent girls to consume an adequate amount of fruits and vegetables and to engage in adequate daily physical activity. WHO's recommendations for daily consumption of fruits and vegetables and physical activity were consistently low in all countries.

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### Effect of a horticultural programme on access and availability of fruits and vegetables — a case study of the Kerala experience

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**Background:** Low fruit and vegetable intake is a leading risk factor for chronic disease globally. Horticulture programmes which encourage cultivation of fruits and vegetables have the potential to increase their intake and dietary diversity by ensuring an affordable year-round supply. My study draws on expert stakeholder testimony given during a “witness seminar” to determine the effect of new horticultural programmes on access, availability and affordability of fruits and vegetables in Kerala, India.

**Methods:** I rely on a witness seminar, a contemporary form of historical research, to examine the influence of horticulture programmes associated with Kerala State Horticulture Mission, Kerala, India on the food environment in Kerala and to uncover issues about access and availability of fruits and vegetables. Participants were purposive sampled from policy makers, experts, activists and representatives of non-governmental organizations representing agriculture/ horticulture (14); nutrition and food policy (4); and health (6), and gender & rural development and poverty eradication (3). Of the 35 invited attendees 27 attended, including panellists and audience members —8 women and 19 men[1]. [1] The witnesses and the audience were almost all from Kerala, save for one panellist who made the journey from Bangalore at his own expense.

**Findings:** Ethics approval was obtained from London School of Hygiene and Tropical Medicine and from each participant (written consent). I used NVivo 10(1) to do a qualitative analysis of the seminar transcript. Stakeholders argue that these recently adopted programmes have expanded fruit and vegetable farming throughout the region. Moreover, women's participation in farming has resulted in conserving and reviving agriculture. However, the programmes have had minimal impact on increasing the availability and affordability of fruits and vegetables. Instead, stakeholders claim that while the programmes benefited mostly banks, traders and farmers, consumers benefited least. Inequalities based on gender and class continue to dictate access to resources. Moreover, high levels of pesticide use, depletion of green leafy vegetables and replacement of local fruit and vegetable varieties are among the programmes' unintended consequences. 1. QSR. I. NVivo qualitative data analysis software. Version 10 2012.

**Interpretation:** This study points to the need to reorient horticulture programmes in societies with high rates of nutritional deficiencies and noncommunicable diseases to local health needs. It argues for equitable access and increased availability of toxin-free, affordable, local fruits and vegetables to support nutrition security and dietary diversity.

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### The postpartum health status of women in an urban clinic in Santiago, Dominican Republic

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**Background:** The postpartum period is of vital importance for the health of both the mother and her newborn. The purpose of this study was to learn about possible trends and gain information about the health of women in the postpartum state.

**Methods:** This cross-sectional study was conducted over five weeks in a free, primary care clinic in an urban neighborhood in Santiago, Dominican Republic. Mothers with children between zero and six months were asked to complete a 24-question survey regarding their health practices, beliefs, and behaviors after childbirth while visiting the clinic (n=29). Patients were asked if they would like to answer the survey and verbal consent was given before beginning. Interviews were conducted in Spanish and in private rooms due to the sensitive nature of the questions. The study was approved by both the local and Mount Sinai IRB.

**Findings:** All surveys conducted were used in the study, including initial pilot surveys at the onset of the study. Basic percentages were gathered based on responses to multiple-choice answers, and 2 sample T-Tests were performed to examine differences between groups. Over 60% of women reported that their pregnancies were unplanned, 70% reported having a C-section, and 21% reported exclusive breastfeeding. Contraception use before and after pregnancy was also very low. Initial data analysis shows no significant difference (p>0.05) between any of the groups (younger versus older mothers, women using contraception, women breastfeeding, women with other children, or women who were married).

**Interpretation:** The survey results were limited due to the low sample size of the patient group. Therefore, more research is needed to fully understand the needs of this population in order to establish interventions that are generalizable to the community. This preliminary research however is helpful in deciding where focus is