

circumstances, greater empowerment is associated with greater tobacco use by women. Using Integrated Demographic and Health Series (IDHS) survey data, we investigate this relationship in India 2005 and Uganda 2011. We also explore how women's literacy impacts the relationship between empowerment and smoking behavior, hypothesizing that empowerment/tobacco links will be weaker among literate women.

Methods: We analyze IDHS survey data for cross-sectional samples of women aged 15–49 in India 2005 ($n = 108,455$) and Uganda 2011 ($n = 8,665$). We employ tabular methods, generalized linear models and latent class analysis to assess relationships between tobacco use and indicators of women's empowerment, including employment, house or land ownership, household decision-making power, attitudes opposing domestic violence, and attitudes supporting sexual autonomy. Using interaction effects, we assess how literacy moderates the relationships between tobacco use and these empowerment indicators.

Findings: Our preliminary findings indicate that tobacco use risk is higher among women with greater household decision-making power, and among women who disapprove of domestic violence in various contexts. In some settings, these relationships are stronger for illiterate women. For both literate and illiterate women, approval of sexual autonomy associates with lower tobacco use. Our final results will reveal how different combinations of women's empowerment are associated with tobacco use.

Interpretation: Our preliminary findings for India and Uganda support the hypotheses that some components of women's empowerment are associated with greater tobacco use, and that literacy moderates these associations under some circumstances. These observational and cross-sectional data analyses can identify associations but not causality. Our results support the need for future research on how measurable indicators of women's empowerment may interact to affect health-related behaviors and risks, which could inform programs that enable both empowerment and healthful behaviors.

Funding: None.

Abstract #: 1.030_MDG

Fostering future global nurse leaders to work toward meeting Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs): a global health intern program at Johns Hopkins University School of Nursing

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Program/Project Purpose: Globally, nurses represent the largest component of health care systems. The care provided by nurses is essential for meeting the Millennium Development Goals (MDGs) as well as the Sustainable Development Goals (SDGs) to deliver quality, effective, and safe care. With global demand for healthcare outpacing the growth in the health care work force and the current human resources for health crisis

(HRH), nurses are an important part of the solution. Focusing on creating robust nursing school curriculums is integral to fostering future global nursing leaders to fill in this gap. In 2015, Johns Hopkins University School of Nursing (JHSON), implemented an intern program for students to engage in global initiatives through the Center for Global Initiatives (CGI). This program is ongoing and will continue with each new cohort of nursing students at JHSON.

Structure/Method/Design: Seven students were selected and take part in the Johns Hopkins University Pan American Health Organization (PAHO) and World Health Organization (WHO) Collaborating Center (CC) for Nursing Knowledge, Information Management and Sharing, coordinating all functions. This program is designed to integrate leadership opportunities as well as global nursing in to the student's nursing education program. Through their immersion in activities with the CC students have been able to participate in enriching learning activities to increase their knowledge of global health issues, develop skills essential for global leadership as well as provide them with experiences consistent with the Recife Declaration (2013) dedicated to equity and universal health care coverage.

Outcome & Evaluation: Students have enhanced their competencies in various arenas including applying evidence-based practice to inform their own education and disseminate these findings to the nursing membership of the Global Alliance for Nursing and Midwifery (GANM) and by employing innovative approaches to the use of technology to increase knowledge and improve health directly through the GANM blog site piloted by the interns to create a forum for a health knowledge exchange.

Going Forward: These experiences have been integral to prepare students to become practitioners sensitive to the complex interplay of social, political and economic factors that influence people's health. This unique program is an important addition to traditional classroom learning opportunities and prepares students to enter the workforce with knowledge and skills to ultimately work toward universal health care coverage.

Abstract #: 1.031_MDG

Assessing contraceptive use in Nicaragua: a cross-sectional survey comparing social attitudes, access, education, and modern contraceptive use in women of reproductive age in rural and urban clinics

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Background: Family planning in Nicaragua has improved substantially since 2000. However, current statistics regarding family planning in Nicaragua are unclear. We compared current social attitudes, access, education, and use of modern contraceptives of female patients in urban and rural clinics. We hypothesized that women living in urban settings would report more accepting social attitudes with higher access, education, and use of modern contraceptives.

Methods: We conducted a cross-sectional study comparing social attitudes, access, education, and modern contraceptive use in

Nicaraguan women of reproductive age (18–49 years old) in rural and urban clinics associated with UNAN-León in León, Totogalpa, and Sabana Grande, Nicaragua. Surveys were orally administered in Spanish by medical students and translators. 212 women were selected by convenience sampling at clinics from May 11th to June 5th, 2015. The survey was anonymous with collection of only broad demographic data, and oral informed consent was obtained from participants. The study was approved by the UC Davis IRB and the Director of UNAN-León.

Findings: Of the 212 women who participated, 52.3% reported living in rural settings while 45.8% reported living in urban centers. 42.5% were between the ages of 18–25 and 57.5% were between the ages of 26–49. Social attitudes preliminary data shows that more rural women reported that their partner is who should decide if they obtain birth control (31.5%) compared to urban women (17.5%). For access, more urban women (90.7%) reported knowing where they could obtain birth control, as opposed to rural women (63%). For education, 90.1% of urban women and 88.7% of rural women reported having seen information or received education about family planning. For contraceptives use, 32% of urban women report using no form of contraception compared to 29% of rural women.

Interpretation: Our findings suggest that differences in social attitudes, access, education, and use of modern contraceptives in Nicaraguan women are not as significant as expected. The study is limited by participant selection and clinic location, limiting its generalizability.

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Abstract #: 1.032_MDG

The short-term response of breast milk micronutrient concentrations to a lipid-based nutrient supplement in Guatemalan women

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Background: Malnutrition is highly prevalent in the Guatemalan population. Impaired nutritional status in lactating women results in decreased micronutrient content of breast milk. Supplementation with a lipid-based nutrient supplement (LNS) during lactation could augment breast milk nutrient content. Our objective was to assess the efficacy of LNS comparing two dosing methods for increasing milk micronutrients in Guatemalan women.

Methods: The randomly-allocated, cross-over design included 30 mother-infant dyads 4–6 months postpartum in Quetzaltenango, Guatemala. In three 8-hour milk collection visits the participating mother received a single bolus dose of 30 g LNS (B), 10 g of LNS divided over 3 time points (D), or no LNS (C). Mid-feed milk samples were collected at each infant feed and total milk consumption measured. Maternal blood was collected at baseline, maternal dietary intake was assessed, and maternal and infant anthropometry was measured. The

primary outcome was area- under-the-curve (AUC) of breast milk B-complex vitamins. [Clinicaltrials.gov](https://clinicaltrials.gov/ct2/show/study/NCT02464111) (NCT02464111on).

Findings: Of 26 dyads completing the study, results for 8 are included in this preliminary data analysis. For milk riboflavin, the mean increase in AUC vs. C was 300±173% for B (p=0.002) and 164±105% for D (p<0.0001). For milk thiamin, this comparison was 25±19% for B (p=0.049) and 24±24% for D (p=0.087). For milk pyridoxal, the B increase was 65±61% (p=0.015) and D was 45±62% (p=0.123). Neither B nor D supplementation strategy increased milk niacin with respect to C, with B increasing 55±137% (p=0.689) and D, decreasing 6±37% (p=0.591).

Interpretation: Supplementation with the bolus dose rapidly and substantially increased the amount of thiamin, riboflavin, and pyridoxal in breast milk, but did not significantly affect niacin. With the current preliminary number of dyads, interpreting the responses for D remains provisional.

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Abstract #: 1.033_MDG

Improving women's confidence and motivation related to healthy lifestyle goal attainment through group-centered meetings at a community based organization

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Program/Project Purpose: Obstacles such as stress and chronic disease often prevent women from achieving wellness. The purpose of Grupo de Bienestar para Mujeres is to use group-based learning and support network development to empower Latina women to achieve lifestyle driven health goals. The program began in January 2014 at CommunityHealth, the largest free clinic serving the uninsured in Illinois, to fulfill the need for culturally competent and sustained sources of support in health goal attainment.

Structure/Method/Design: The program's goals are to:

- 1) Deliver health information through peer-driven exchange and discussion of approaches to healthy eating, exercise, and stress reduction.
- 2) Increase participants' knowledge, confidence, and motivation related to health information and goal attainment.
- 3) Foster an environment of sustained support to increase individual and community health.

Groups consist of Spanish-speaking women in the community served by CommunityHealth. Participants are recruited directly by provider referral, attendance at other health-education courses, or through response to advertisement.

During weekly group meetings, women participate in a discussion-based session utilizing health information materials and