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Integration of health education into a school curriculum in rural India: an evaluation of challenges faced

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Program/Project Purpose: In 2008, the Global Health Initiative Spiti Valley Project collaborated with Munsel-ling School in India's Spiti Valley to develop a health education curriculum. Spiti Valley is restricted by geographic and environmental conditions and is inaccessible for most of the year. The region is highly underserved with limited access to healthcare and education. The curriculum was first delivered in 2009 with revisions in 2010 and 2015. After 7 years, this resource has yet to be integrated into the government-mandated curriculum at Munsel-ling. This has been acknowledged and the Spiti Valley Project began to evaluate the challenges hindering curriculum implementation and proposed potential solutions.

Structure/Method/Design: The curriculum was delivered in 2009. In 2010, it was discovered that teachers were unable to accommodate the material into the course load. The Students' Health Council (SHC) was developed to address the need for pedagogical sustainability. The SHC consisted of senior students who would be taught the curriculum to teach to younger students. In 2013, a narrative voice project determined the relevance of the curriculum in the community's health priorities. In 2015, Munsel-ling requested a more comprehensive curriculum detailing learning objectives, lesson plans, competency goals, and assessment activities. Despite these changes and revisions, the curriculum has not been implemented.

Outcome & Evaluation: The narrative voice project revealed that the community valued the curricular content. Interviews with the school director, principal, and teachers revealed operational challenges to implementing the curriculum. Issues affecting curriculum integration include: lack of infrastructure in leaders' roles resulting in the disbandment of the SHC, miscommunication regarding program leadership, inability to incorporate the curriculum into a packed curriculum, inconsistent schedules, student and teacher absenteeism, overworked or disinterested staff, and concurrent projects that were considered higher priorities: water purification and sanitation.

Going Forward: We will endeavor to better understand the challenges and continue to make suggestions. Structurally, solutions include developing well-described roles and setting dates for teaching. However, solutions go beyond leadership responsibilities: the location of Munsel-ling results in a constant shortage and quick turnover of teachers. Ultimately, the curriculum needs to be integrated by the school itself and its success requires further buy-in by teaching staff into the curriculum.

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Affordable technology for saving maternal and infant lives: moving on with solutions

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Background: Pakistan loses mothers and neonates because of low utilization of skilled birth attendants (SBA) and is among the six countries that contribute half of the global maternal-infant mortality. Lady Health Workers (LHWs), placed in most villages to foster behavior change, have struggled to increase utilization of SBAs. We employ an affordable tool to focus their services and to achieve rapid, effective adoption of lifesaving healthcare with an anticipated increase of SBA from 60% to 80%.

Methods: We recorded health messages linked to progression through pregnancy and 6 months postpartum that are delivered in female voices directly to the pregnant woman by cellphone, costing \$6.98 per annum. By providing health information across low literacy and social barriers, we seek to optimize the services of LHWs and achieve rapid, effective behavior change. The intervention is being implemented in a cluster randomized controlled trial with 1,556 women enrolled during the first trimester of pregnancy by household visits in 411 villages in two districts of Pakistan. The trial has five arms to test the effectiveness of higher versus lower frequency of messages, messages timed with progression of pregnancy and messages linked with small financial incentives. A concurrent intervention provides health literacy support to LHWs. The primary outcome is adoption of intrapartum care with SBAs; the secondary outcomes are health literacy scores, and the health outcomes of mother and infant.

Findings: The baseline health literacy assessment showed low recognition of complications requiring emergency obstetric care (<30%) for both pregnant women and LHWs. The use of antenatal care was 72%. Twenty-five percent had suffered serious complications in previous pregnancies and only 61% delivered under care of SBA.

Interpretation: We will present early results from the ongoing trial and a discussion of health literacy as a mediator for maternal and infant health outcomes, enabling navigation through complex health systems. We will also present results of the effect of health literacy on women's empowerment within the traditional households for seeking appropriate and adequate healthcare. This approach, designed for adoption "on the ground," is replicable and scalable in different social and cultural environments.

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Preconception risk factors and attitudes about reproductive planning in women of reproductive age in the Dominican Republic

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Background: Worldwide, over 3.6 million neonatal infants die, often due to maternal health complications. Preconception care is defined as biomedical, behavioral and social health interventions before conception occurs. Recent research has established linkages of preconception interventions with improved maternal and child outcomes. A Reproductive Life Plan is shown to be an effective communication tool with patients regarding overall reproductive goals. Maternal and neonatal mortality rates in the Dominican Republic (DR) remain high. There are no studies presently published examining the association between preconception risk factors and attitudes regarding reproductive planning in the DR.

Methods: In this cross-sectional, descriptive study, a reproductive health survey was administered to women age 18 – 49, excluding women with hysterectomy or bilateral tubal ligation, in 4 outpatient public clinics in Santiago, DR. Survey questions included age, education level, self reporting of preconception risk factors, and calculation of BMI. Women were asked if they had thought about a reproductive plan: planning for or preventing pregnancy. Greater thought of reproductive planning was defined as women who answered somewhat, moderately and a lot on a 5-point likert scale. Logistic regression was used to assess significant associations between variables.

Findings: A total of 381 women of reproductive age participated, with a median age of 24 (IQR, 20–29) years. In a univariable analysis, hypertensive women (OR, 0.36; 95% CI, 0.17–0.78; $p=0.009$) and women who had a short-interval pregnancy (OR, 0.51; 95% CI, 0.27–0.94; $p=0.03$) had lower odds of thinking about reproductive planning. Women aged >25 years (OR, 1.84; 95% CI, 1.29–2.64; $p=0.001$) and women with at least a high-school education (OR, 2.01; 95% CI, 1.21–3.36; $p=0.007$) had greater odds of thinking about reproductive planning.

Interpretation: Women with preconception risks such as hypertension and short interval pregnancies are at lower odd of thinking about reproductive planning and may be at higher risks for maternal and fetal complications during pregnancies. Further assessment of preconception risks may provide a framework for targeted counseling interventions in women of reproductive age and possibly improve maternal and child health outcomes.

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Abstract #: 1.019_MDG

Sexual risk behavior and HIV testing and status among male and transgender women sex workers and their clients in Lima, Peru

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Introduction: Male and transwomen sex workers (MTSWs) are among the most at-risk populations for HIV, but there is little research globally with these groups, and even less with their clients. These populations are crucial since they may contribute to transmission of HIV among key and general populations.

Methods: Following ethnographic mapping of sex work venues, we revisited randomly selected venues to survey MTSWs and their male clients. We surveyed 100 MSWs, 181 TSWs and 95 clients from 24 venues. We used smartphones to ask participants about their socio-demographics, recent sexual practices (last 3 months), and HIV testing history and status. We present descriptive analyses where SW figures are weighted for the proportion of SWs surveyed at each venue.

Findings: Clients are about 10 years older than MTSWs. MSWs are slightly more educated than their clients, while TSW clients are much more educated than TSWs. While 72–84% of MTSWs and MSW clients have ever been tested for HIV, only 50% of TSW clients have been tested. Self-reported HIV positivity is highest among MSW clients (18%) and TSWs (19%), compared to MSWs (3%) and TSW clients (4%). All participants had at least one recent male or transwoman partner both overall and within a transactional sex context. Fewer (17–42%) reported recent non-transactional sex with a man or transwoman. Clients of MSWs reported more receptive anal intercourse during transactional (75%) versus non-transactional sex (32%) and a significant minority reported no anal intercourse with both types of partners. TSWs have more insertive anal intercourse inside (45%) versus outside (24%) of transactions. TSWs are more likely than MSWs to have condomless anal sex with transactional partners, both insertive (36% vs 9%) and receptive (31% vs 3%). At least one recent female partner was reported by most MSWs (62%) and TSW clients (76%), but few TSWs (2%) or MSW clients (20%).

Interpretation: This is one of the first studies to collect data directly from clients of sex workers. There are noteworthy differences between MTSWs and their male clients that can affect the health, including HIV and other sexually transmitted infections, of these groups and their sex partners.

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Global burden of disease: diabetes burden and its relation to socioeconomic, environmental, behavioral, and health risk factors in low- to middle-income Southeast Asia

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Background: Diabetes is a global health concern affecting 382 million people. Around 80% live in developing economies, stressing