

Methods: The aim of this study was to reassess perceptions of indoor air quality (IAQ), the presence of respiratory symptoms and the impact the stove intervention might have had. A voluntary, anonymous survey was conducted in June 2016 in two rural villages and results were compared to prior survey data. A total of 185 surveys were collected.

Findings: Respiratory symptoms were commonly reported; poverty status and stove replacement were significantly associated with the frequency of respiratory symptoms. When compared to 2012, household members being treated for respiratory problems decreased from 27% [21/79] to 14% [26/185]; there was also a 29% decrease in respondents noting that IAQ was a problem that affected their daily lives.

Interpretation: These findings will help inform further public health efforts in the region.

Source of Funding: None.

Abstract #: 2.012_NCD

Diabetes Awareness and Education Program

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Program/Project Purpose: DAEP, Diabetes Awareness and Education Program is a countrywide program initiated by Rwanda Pharmaceutical Students in 2015 with the aim of raising an awareness on diabetes; its causes, symptoms, treatments and prevention, highlighting the importance of starting the day with a healthy breakfast to help prevent the onset of type 2 diabetes and effectively manage all types of diabetes to avoid complications as suggested by the International Diabetes Federation (IDF) and also assess nutrition status and blood pressure measurement for participants to appraise risks factors and complications.

Structure/Method/Design: It consists of

- mass education and awareness programs for participants through higher learning institutions
- trainings for health care providers
- nutrition status assessment and blood pressure measurement to appraise diabetes risk factors and complications
- free diabetes screening
- teaching participants about prevention of diabetes and other NCDs and measures of controlling.

Outcome & Evaluation:

- Have assessed its impact by creating a research paper that has been published and presented.
- New cases of diabetes that have been discovered, have been referred to care facilities and registered in Rwanda Diabetes Association for free treatment.
- 1000 of people have been found with risks of getting the disease due to the overweight and hypertension factors and have been counseled and those new cases referred to healthcare facilities.
- All trained health care providers have brilliantly passed the post program evaluation.

- Due to the research paper new strategies have been adopted by the country. Such as monthly car free day.

Going Forward: Regarding the keenness and the willingness of people to gain more knowledge about NCDs especially Diabetes, and considering the impact of the first phases of the program, we are looking forward to expand the project; during next steps, we will be targeting villages in rural areas where people are more vulnerable. Actually the ministry of health embraced this issue and we have been granted new materials such as glucometers and blood pressure monitors to be used in future steps. Have been able to sign memorandum of understanding (MoU) with new partners such as Rwanda Health Foundation hence allowing us to sustain and expand the program and have joined the Rwanda NCDs Alliance.

Source of Funding: University of Rwanda Rwanda Diabetes Association.

Abstract #: 2.013_NCD

Disparities in Smoking Prevalence: A Missed Opportunity for Tobacco Control in Pakistan

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Background: Pakistan is one of the highest tobacco consuming countries in South Asia and consumption is increasing. For Pakistan to implement equity orientated tobacco control policies, the most vulnerable groups must be identified. We aimed to identify these groups using data from the Pakistan Demographic and Health Survey (PDHS) 2012-13.

Methods: The PDHS collected data from households in all four provinces of Pakistan and Gilgit Baltistan areas. The household questionnaire asked about smoking behaviour inside the home, the individual questionnaires inquired about participant tobacco use. Descriptive statistics, univariate and multivariate analyses were used to explore household characteristics associated with smoking inside the home, and participant characteristics associated with tobacco smoking. Survey weights were used to give nationally representative findings.

Findings: Data for 12,931 households, 3,132 men and 13,538 women were examined. 58.3% of surveyed households were smoke-free, 39.1% were exposed to indoor tobacco smoke every day, while 2.6% were exposed less frequently. More rural households were exposed to indoor tobacco smoke than urban households (45.2% vs 34.9%). This association was significant in univariate and multivariate analyses. 28.3% of men reported smoking compared with 1.3% of women. In both men and women, there was a higher prevalence of smoking in older age groups (18.9% and 0.4% aged 15-29 respectively, 34.2% and 2.3% aged 40-49 respectively). Increasing wealth was associated with lower prevalence of smoking and indoor smoking. For men, increasing education was associated with reduced tobacco smoking but this was not true for women.

Interpretation: People with lower income, rural households and less educated males are particularly vulnerable to the tobacco

epidemic in Pakistan. Disparities in smoking behaviour impose harm to those who can least afford the financial and health costs. Future tobacco control policies must be sensitive to gender, geography and socio-economic status.

Source of Funding: None.

Abstract #: 2.014_NCD

Healthy Eating and Active Living (HEAL): Feasibility and Acceptability of Implementing School-based Intervention to Control Childhood Overweight and Obesity in Urban Area of Bangladesh

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Background: The prevalence of overweight and obesity is now on the rise in Bangladesh along with the rapid urbanization and nutrition transition. There is no evidence of intervention to control such growing burden among children and adolescent in Bangladesh. The study aimed to test feasibility and acceptability of culturally appropriate healthy eating and active living (HEAL) guidelines for children and adolescents to control overweight and obesity through a school based initiative.

Methods: We randomly selected 4 schools out of all schools from Dhaka north city corporation zone. All students from grade 3 to grade 9 were invited to participate in an anthropometry survey. Among them, parents of randomly selected overweight and obese children were invited to participate in a one hour interactive intervention session to bring modification in diet and lifestyle behaviors based on culturally appropriate healthy eating and physical activity guideline. We also designed a healthy tiffin box to put into practice of HEAL guideline. For more depth information, we conducted 8 focus group discussions, 20 in-depth interviews including parents, children and 12 key informants' interviews including wide range of experts.

Findings: A total of 831 students participated in the primary anthropometric survey. 25.2% (n=209) and 23.8% (n=198) among the participants were found overweight and obese respectively. Finally, 112 overweight and obese students, 28 from each school were randomly selected and their parents were invited to take part in the training sessions. 85% (n=95) parents participated in the intervention session. The result revealed that parents and children were aware of childhood overweight and obesity, but lifestyle related unhealthy behaviors existed. Moreover, they have knowledge on health impact of unhealthy behaviors, but forced to continue these for different factors (i.e, taste, parental busy life, diversity of fast food types, attractive advertisements, easy accessibility and availability of fast food shops and restaurants, inadequate time, academic pressure, and social security).

Interpretation: Intervention through HEAL guideline used a school approach with interactive learning is feasible. Target group for HEAL guideline should include teacher, parents and children as a group when attempting to control overweight and obesity among children.

Source of Funding: SIDA.

Abstract #: 2.015_NCD

Independent Field Audit of Individual Household Latrine (IHHL) in Charutar Region of Gujarat, India

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Background: In India, the promotion of total sanitation is increased by the "Swachh Bharat Mission" initiative of the current Government. Construction of Individual Household Latrines (IHHL) is one of the key components under the mission to achieve 'Open Defecation Free'(ODF) status for urban areas and villages. Urban areas and 4,800 villages in the state of Gujarat have been declared ODF. However, there are various reports questioning construction and utility of IHHL. We conducted an independent audit of IHHL in Charutar region of Gujarat.

Methods: Four villages (two each with ODF and not-ODF status) were randomly selected. Every third household in Ravipura was visited. In Gana, Boriya and Vadtal, all households in areas where the latrines were predominantly constructed under IHHL scheme were visited. Trained surveyors collected questionnaire and observational data (including photographs) after obtaining written informed consent. Socio-demographic characteristics and utilization of IHHL was captured through a pre-tested questionnaire along with physical evaluation of latrines. The data was captured on the mobile-based MAGPI platform. Descriptive statistics were used to portray socio-demographic factors, availability and utilization of latrines. Chi-square test was applied to assess associations between categorical data.

Findings: Of the 536 households visited, 391(73%) had latrine facility, of which 313(80%) consented for the evaluation. Majority of the latrines were constructed in the current year[179(57.19%)], by Local Self-Government[245(78.27%)] and were located outside the house[271(86.58%)]. Eighty-five(27.16%) reported that they are not using the latrine. Commode was not installed in 11 latrines while proper drainage system was absent in 17 latrines. Households having tap connection in latrine were significantly more likely to use latrines as compared to those without tap connection(57% vs 10.6%, p<0.001). Among villages declared ODF, 53 and 65 households in Ravipura and Vadtal, respectively, did not have latrine.

Interpretation: Despite fast-tracked construction of IHHL under the NDA government, indicators used to declare villages ODF are not full-proof and can be manipulated to inflate coverage statistics. Further research to explore behavioral, structural and system barriers regarding construction and utilization of IHHL is needed. From a programmatic perspective, appropriate monitoring and evaluation systems with context-specific behavior change communication is required to achieve and sustain ODF status across India.

Source of Funding: None.

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