Summarizing Factors Contributing to Partial or Non-utilization of Individual Household Latrine (IHHL) in Charutar Region of Gujarat, India

K.N. Talati[1], B. Joshi[2], K. Prajapati[2], S. Mishra[2], **A. Phatak**[3], S. Nimbalkar[3], H. Murphy[4], A. Dongre[5]; [1]Foundation for Diffusion of Innovations, Vadodara, India, [2]Sardar Patel University, Vallabh Vidhyanagar, India, [3]Charutar Arogya Mandal, Karamsad, India, [4]Temple University, Philadelphia, USA, [5]Sri Manakula Vinayagar Medical College and Hospital, Puducherry, India

Background: Sanitation campaign in India found renewed interest after Prime Minister Narendra Modi mentioned about it in his 2014 Independence Day speech followed by launch of "*Swachh Bharat Abhiyan*"(SBA). Construction of Individual Household Latrines(IHHL) is one of the key components under the mission to achieve 'Open Defecation Free'(ODF) status. While IHHLs have been constructed in majority of villages in Gujarat, government is now campaigning for its increased utilization. The study assessed factors contributing non-utilization of IHHLs so that promotional campaign can be contextualized to address underlying issues.

Methods: Four villages were randomly selected in Charutar region of Gujarat and 313 eligible respondents were surveyed after obtaining written informed consent. Trained surveyors collected socio-demographics and observational data using a structured questionnaire. In case of non-utilization, an open-ended question probed reasons for the same. The responses were summarized to report key findings.

Findings: Out of 313 respondents, 85(27.16%) reported that not all the family members in their household are using IHHL. Review of responses revealed that elderly members were reluctant to use latrines constructed just outside the household. One elderly female responded that as long as she can walk, she will prefer going to the field for open defecation. Higher number of family members was also reported as a barrier because one latrine was not sufficient for all the members.

Commode was not installed in 11 latrines which were mainly used as dry-store. Overhead tank and tap were not fitted in 121(39%) & 163(52%) latrines respectively, these together with limited water storage capacity, limited 5' depth of cesspool and inadequate drainage facility were also reported as reasons for non-utilization.

Interpretation: Following fast-tracked construction of IHHL, now the challenge is to promote sustained utilization. Broadly, the barriers can be categorized as household- and structure-related. Participatory research involving IHHL beneficiaries and relevant stakeholders can help further investigate key barriers to non-utilization and list out locally adaptable, potential solutions. The findings can then be utilized to strengthen program planning & implementation, and design context-specific health promotion intervention to achieve ODF status. Opportunities for resource sharing between IHHL beneficiaries and local self-government to fix-up structural barriers can also be investigated.

Abstract #: *2.017_NCD*

Self-reported Oral Hygiene Care and Natural Teeth Retention among Older Singaporeans

Y. Qian[1], B. Wu[2], C. Sim[3]; [1]Duke University, Durham, North Carolina, USA, [2]New York University, Durham, USA, [3]SingHealth, Singapore, Singapore

Background: In recent years, the elderly population in Singapore has significantly increased. However, few studies have conducted on oral health among older Singaporeans. Oral health is an important part of general health. Studies have shown that poor oral health is related to pain, functional impairment, and quality of life. The aim of this study is to examine the association between self-reported oral hygiene care and tooth retention from clinical examinations among older adults by linking the survey to patients' dental records.

Methods: A total of 240 participants completed a survey questionnaire. The participants were recruited from those who visited National Dental Centre of Singapore in summer 2016. In the study, older adults's oral health-related quality of life was measured by the geriatric oral health assessment index (GOHAI). The survey also included self-reported oral hygiene care and nutritional behaviors. Participants' dental records were obtained which included the information on number of natural teeth remaining, dental caries, periodontitis, and dry mouth.

Findings: Amongst the 240 participants, the mean number of natural teeth remaining was 18.56 (95% CI 17.54-19.59). There was a significant gender difference in frequency of tooth-brushing, with female had a higher frequency of brushing twice a day than their male counterparts (p=0.03). A linear regression model showed that the number of natural teeth remaining was significantly associated with the frequency of teeth flossing (p=0.001) but it was not correlated with brushing frequencies. Logistic regression models were used to evaluate the relationship between oral health-related quality of life and natural teeth remaining and found that patients with trouble biting, swallowing and food limiting were associated with less natural teeth remaining (p=0.001).

Interpretation: This study suggests that among the elderly Singaporeans, teeth flossing is important to natural teeth retention and should be promoted from a policy perspective.

Abstract #: *2.018_NCD*

Prehypertension and Hypertension in Bangladesh – Modifiable Lifestyle Factors

M. Rahman, Y. Fakir; BRAC, Dhaka, Bangladesh

Background: It is documented that pre-hypertensive patients are at greater risk of developing hypertension and thereby more likely to experience cardiovascular diseases in their lifetime. However, little attention has been given to the lifestyle modifiable factors that enhance developing prehypertension in order to prevent the transfer from pre-hypertension to the hypertension.

Methods: We measured blood pressure from a total of 11861 (5743 men and 6118 women) participants aged over 35 years.

Besides, we collected information related to their household level socio-economic, demographic and lifestyle information through individual interviews with household members.

Findings: We found the chance of having pre-hypertension increases with the increase with age irrespective of gender. Women are more suffer than men for developing pre-HTN (2.31 vs 1.46) and HTN (4.25 times respectively). However, obese men had a high chance 2.46 and 4.23 times higher of developing of pre-HTN and HTN than that of women (1.48 and 2.58 times). Those men and women who sleep more than >9 hours in 24 hrs were more likely to be pre-hypertensive (men 1.32 and female 1.53 times) and hypertensive (men 1.30 and female 1.38 times). The chance of being hypertensive reduced when men and women sleep ≤6 hours (1.04 and 1.17 times respectively). Interestingly, although small but still at risk of developing HTN were men who snored. It was found that 20% of men and 19 % of women who snored had hypertension.

Interpretation: This study add with the existing knowledge of lifestyle modifiable factors for pre-hypertension and hypertension that snoring is an independent factors for developing pre-hypertension and hypertension.

Abstract #: *2.019_NCD*

Thinking Out of the Box - Snoring as Global Non-communicable Health Concern

M. Rahman[1], F. Yunus[2]; [1]BRAC, Dhaka, Bangladesh, [2]Research and Evaluation, BRAC, Dhaka, Bangladesh

Background: Although snoring is commonly known but ignored breathing problem that affects among all ages and both genders,contribute to poor health and diminishes quality wellbeing. We, therefore, aimed to study the relationship of snoring with chronic disease among the Bangladeshi population.

Methods: We collected data from 12338 Bangladeshi men and women over 35 years residing both in urban and rural areas. Participant's socio-demographics, behavioral, lifestyle, and chronic disease (diagnosed by registered physician) were collected using android operating system based "CommCareHQ" platform on the 7" monitor tablets. Data was analyzed based on two categories - Diagnosed with chronic disease and Not diagnosed with chronic disease using both descriptive and inferential statistics.

Findings: We found 20.9% of the participants had been suffering from snoring among the all population. Regards to the diagnosed with chronic disease category, we found a total of 1245 (56.8%) participants had snoring and 946 (43.2%) participants had no snoring history. In the second category i.e participants with no chronic disease, 5431 (53.5%) participants had snoring and 4716(46.5%) had no snoring. We noted snoring during sleep significantly increased the risk of chronic disease i.e 1.4 times higher chance of suffering from chronic disease to those participants who had snoring (RR=1·41, 95% 1·30-1·52).

Interpretation: Snoring is an independently associated factor for chronic disease among the Bangladesh population and should be in incorporated in the chronic diseases screening tools at the community level detection.

Abstract #: *2.020_NCD*

Health Related Quality of Life in Morbidly Obese Women Attending a Tertiary Care Hospital in India

S.L. Ramasamy[1], N. Kapoor[2], M. Joseph[2], S. Jiwanmall[2], D. Kattula[2], V. Abraham[2], I. Subramaniam[2], T. Paul[2], N. Thomas[2]; [1]Weill Cornell Medicine, New York, New York, USA, [2]Vellore Christian Medical College, Tamilnadu, India

Background: The prevalence of obesity is increasing worldwide, attributable to shifts in diet and lifestyle. Obesity is correlated with increased health risks including cardiovascular disease, hypertension, and diabetes mellitus. South Asians have higher body fat percentage at lower BMI's compared to European counterparts, and therefore have the same health risks at lower stages of obesity.

Increased medical and psychiatric conditions and mobility restrictions associated with obesity have a direct impact on the HRQOL of these individuals. Furthermore, HRQOL has been demonstrated to be a predictor for future mortality and treatment compliance. This study analyzed the HRQOL in morbidly obese women (Body Mass Index ≥35 Kg/m2) attending a bariatric clinic in a tertiary care hospital in India and aimed to ascertain potential anthropometric correlates.

Methods: Anthropometry collected included weight, BMI, waist circumference, hip circumference and waist height ratio. HRQOL was assessed using an obesity related QOL questionnaire focused on obesity's impact on physical distress, self-esteem, sexual and work life. This 6 month study then divided the 88 morbidly obese female patient population into two groups by the overall mean QOL total score with <=50% as the Low QOL group (N=35) and > 50% as the High QOL group (N=32).

Findings: The low QOL groups had significantly fewer children (1.41±1.150, p=.016), higher BMI's (42.10±6.27 kg/m^2, p=.001), higher hip circumference values (124.71 ± 11.91 cm, p=.001), and lower waist to hip ratios (.92±.08, p=.032) compared to the high QOL group. Significant negative correlations were determined between QOL and BMI (r=-.404, n=67, p<.01) with regression further demonstrating the strongest correlation between BMI and QOL (R^2 =.163).

Interpretation: With limited literature assessing the QOL of obese South Asian patients, this study sought to provide insight. Because of the demonstrated strong correlation between BMI and HRQOL, in addition to the ease with which BMI can be measured in under resourced healthcare settings, we recommend that clinicians assess BMI as a potential correlate for HRQOL. We also recommend this correlation be used as a starting board for conversations with patients on QOL, providing opportunities to recognize medical and psychiatric comorbidities that may otherwise go unnoticed in a hectic tertiary care setting.

Abstract #: *2.021_NCD*