

**Background:** There is a need for information on the perceptions of health concerns from a local perspective since resource availability and behavior expectations differ widely by social structure and region. Cultural competency, such as accurate definitions of health and illness are an integral part of developing effective medical interventions and educational initiatives because they allow research to respond directly to public needs, misconceptions, or behavioral practices.

**Methods:** An initial pilot needs assessments conducted in the Coastal Ouest region of Haiti eluded to a belief that vaginal illness related to water quality was a major concern among community members. Since the relationship between water quality and feminine health is not reflected in the literature, follow-up research was conducted to better define the beliefs and behaviors associated with “vaginal illness” and “poor water quality” from a local perspective. Cultural perceptions of vaginal illness related to water quality were explored with maximum variability sampling among community members and key informants. Participants were selected based on diversity criteria including age, gender, socioeconomic status, occupation, and type/degree of medical training. Beliefs and themes surrounding vaginal illness and water quality were allowed to arise through open-ended, semi-structured interviews conducted with the use of qualified translators.

**Findings:** Results indicate that the perception exists among all (N=37) Haitian study participants that water is related to vaginal illness, with 81% (N=30) of Haitian participants expressing the belief that water is a direct cause of vaginal illness.

**Interpretation:** The current biomedical model does not support the claim that water is causally related to vaginal illness in Haiti. However, given the cultural and behavioral patterns associated with water use in Haiti this association cannot be immediately dismissed. The current research indicates that the additional monitoring of bathing water may be a justifiable public health concern in tracing the transmission of vaginal infections, though further research is needed to determine what if any, specific pathogens might frequently be transmitted through contact with contaminated bathing water.

**Source of Funding:** Dean Michael G. Perri, with the College of Public Health and Health Professions at the University of Florida.

**Abstract #:** 1.010\_NCD

### Association between Childhood Abuse and Health Risk Behaviors among Chinese College Students

Y. Chen<sup>1</sup>, Q.-Q. He<sup>2</sup>; <sup>1</sup>University of Washington, Seattle, WA, USA, <sup>2</sup>Wuhan University, Wuhan, China

**Background:** Little is known about the link between child abuse and health risk behaviors among Chinese college students.

**Methods:** This cross-sectional study examined the prevalence of child abuse and its relations with individual and clusters of health risk behaviors among Chinese college students. A total of 507 students participated in this survey in Wuhan, China from April to May 2012. Six health risk behaviors were investigated among Chinese college students: internet addiction, self-harm behavior, suicidal behavior, current smoking, binge drinking, and risky sexual

behavior. Items were adapted from Youth Behavior Survey Questionnaire (YRBS) developed by the CDC in the USA and Young's Internet Addiction Test. Experiences of child abuse occurred before age 18 were measured by using *Childhood Trauma Questionnaire – Short Form (CTQ-SF)*, a well-validated retrospective self-report inventory.

**Findings:** The prevalence of child abuse from highest to lowest was emotional neglect (53.9%), physical neglect (49.0%), emotional abuse (21.8%), physical abuse (18.3%), and sexual abuse (18.1%), respectively. Males were more likely to report child abuse than females ( $p < 0.01$ ). For males, emotional abuse was associated with internet addiction (OR = 2.28; 95% CI: 1.00, 5.20) and suicidal behavior (OR = 12.47; 95% CI: 2.61, 59.54); while sexual abuse was associated with internet addiction (OR = 2.30; 95% CI: 1.14, 4.66). For females, emotional abuse was significantly associated with increased risks for self-harm behavior (OR = 15.03; 95% CI: 3.59, 63.07) and suicidal behavior (OR = 5.16; 95% CI: 1.63, 16.40). Physical abuse was related to risks for internet addiction (OR = 2.50; 95% CI: 1.03, 6.04) significantly. Two-step cluster analysis showed that participants in clusters with more health risk behaviors reported higher scores of child abuse.

**Interpretation:** Our study reveals significant association between child abuse and multiple health risk behaviors among Chinese college students. Our findings highlight the need for implementing effective education programs targeting parents to adopt the best parenting style to raise their children. Furthermore, it will be important to early identify and take interventions for college students to reduce the occurrence of unhealthy behaviors in this population.

**Source of Funding:** None.

**Abstract #:** 1.011\_NCD

### Pediatric Burn Injuries in Northern Laos

D. Cheung<sup>1</sup>, M.-K. Jung<sup>2</sup>, K. Douangdala<sup>3</sup>, D. Bouapao<sup>3</sup>, C. Sanderson<sup>3</sup>; <sup>1</sup>NYIT College of Osteopathic Medicine, New York, New York, USA, <sup>2</sup>NYIT College of Osteopathic Medicine, New York, USA, <sup>3</sup>Lao Friends Hospital for Children, Luang Prabang, Lao

**Background:** Burn injuries represent the third most common type of trauma experienced by the pediatric population and are a significant cause of pediatric mortality and lifelong disability worldwide. The current global burden of burn injuries is profoundly inequitable with low and middle-income countries (LMICs) carrying approximately 90% of total burn cases. The region of Southeast Asia carries the highest annual incidence of burn injuries at 243 per 100,000 population. Children in LMICs, like Laos, have been shown to be at higher risk of burn injuries- through flame burns or scalding. However, no research has been conducted on the patterns of pediatric burn injuries in Laos to date. The main objective of this study is to describe patterns and understand trends among pediatric patients treated for burn injuries in Northern Laos.

**Methods:** This retrospective chart review was carried out at the Lao Friends Hospital for Children in Luang Prabang, Lao PDR. Each child's medical record was reviewed for demographic features, mechanism of burn, and duration of hospital stay. The chi-square test was used to analyze associations between two categorical

variables and one-way ANOVA was used to compare the mean continuous variables between groups.

**Findings:** The chart review of 12,449 patients seen at the LFHC yielded a total of 31 burn patients. Compared to the Lao, Hmong, and other ethnicities, the Khmuic ethnicity is related to a significantly higher occurrence of burn injuries in Northern Laos. ( $p=0.006$ ). Compared to all other age groups, the adolescent age group experienced longer mean duration of hospital stay ( $p=0.02$ ). Average duration of hospital stay was 16 days ( $SD\pm 34$ days).

**Interpretation:** Scalding was found to be the most common mechanism of pediatric burn injuries in Northern Laos. Our preliminary findings from the Lao Friends Hospital for Children indicate a need for further research on the burn risk amongst the various ethnic groups in Northern Laos. Pediatric burn injuries are an important yet under-researched topic in this country. Only with more data on hand will we be able to craft meaningful prevention programs targeted to behavior change in Laos.

**Source of Funding:** NYIT College of Osteopathic Medicine Presidential Global Fellowship.

**Abstract #:** 1.012\_NCD

### Barriers to Cardiovascular Disease Secondary Prevention Care in the West Bank, Palestine - A Health Professional Perspective

*V.J. Collier; King's College London, London, United Kingdom*

**Background:** Non-communicable diseases (NCDs) are fast-becoming a global burden on health due to the rise in the rates of conditions such as cardiovascular disease (CVD), increasingly noticeable in developing countries. There is a dearth of earlier studies relating specifically to patients and their capacity for risk factor behaviour change within secondary care settings.

**Aims:** (1) to ascertain whether health professionals consider there are specific barriers for patients in the Occupied Palestinian Territories (OPT) to participate in lifestyle changes; (2) to determine which risk factors for cardiovascular disease hinder patients to change their health behaviour; (3) to determine what the barriers and their causes may be; (4) to investigate whether health professionals consider there is any action that can be taken and by whom, to overcome any identified barriers to care at a system-level or at an individual patient-level approach.

**Methods:** A study was carried out in the West Bank of Palestine using semi-structured qualitative interviews of 12 participants (2 female), recruited through 3 initial 'cold' recruitment emails to medical establishments. The number of participants recruited was dictated by the length of time available in the field. Low-risk ethics approval was granted by the academic institution of the author. Written consent was obtained prior to each interview.

**Findings:** The current Israeli occupation affects the Palestinian people at both an individual and a system-level approach. Stress is considered both a risk factor for CVD, and a barrier to health behaviour change. Poor communication exists between primary and secondary care services, and primary care facilities are not providing adequate intervention to support the detection and management of risk factors for CVD.

**Interpretation:** This study has provided some insight into how social determinants of health can affect health behaviours and the consequent struggle for behaviour change, particularly within a conflict setting. Similar studies within primary care services, with patients themselves, and with other health professionals working in this field of NCDs, may help to inform future health options for collaborative working aimed at addressing CVD in the region. To be effective, however, attention also needs to be given towards a solution for political change.

**Source of Funding:** Elizabeth Casson Trust contributed to funding this study.

**Abstract #:** 1.013\_NCD

### Preventative Healthcare in Post-Soviet Armenia: Providing Education and Screenings to Expand Awareness of Noncommunicable Diseases

*H.Z. Wright<sup>1</sup>, E. Gavin<sup>2</sup>, N. Channell<sup>2</sup>, B. Craner<sup>3</sup>, K. Amirkhanasbovili<sup>2</sup>, M. Hovhannisyani<sup>4</sup>; <sup>1</sup>University of Utah, Salt Lake City, UT, USA, <sup>2</sup>University of Utah School of Medicine, Salt Lake City, Utah, USA, <sup>3</sup>University of Utah, Salt Lake City, USA, <sup>4</sup>Yeravan State Medical University, Yeravan, Armenia*

**Program/Project Purpose:** Non-communicable diseases (NCDs) account for more than 75% of deaths globally on an annual basis. Cardiovascular disease (CVD), cancer, diabetes, and respiratory disease (CDC) are the most prominent NCDs which, while typically unique to the developed world, are growing in prominence in post-soviet nations. In Armenia, mortality from chronic preventable NCDs is over 90%, with a 30% yearly risk for individuals between 30-70 years of age (WHO). Education, prevention, health screenings and cost-effective treatment options would be a boon to Armenia and all developing nations' efforts to combat barriers to NCD reduction. Global Health Armenia (GHA) conducted a collaborative multidisciplinary outreach project providing education in NCD prevention and free health screenings, along with encouraging participants to follow up with their community physicians when indicated by their screening results.

**Structure/Method/Design:** In an effort to provide mutually beneficial service, GHA collaborated with local organizations, Yerevan State Medical University (YSMU) and the Armenian Ministry of Health (MOH). Medical and Global Health students from YSMU worked with GHA students serving as interpreters to provide health educational services to the Armenian community. Outreach events were conducted in Gyumri, Yerevan, Ararat, Talin and Martuni, and achieved both urban and rural contact.

**Outcome & Evaluation:** Health screenings (BMI, blood pressure, glucose, and cholesterol) were performed to assess risk factors for chronic disease. Screening sessions included results-based NCD risk-reduction counseling using approved educational materials. Additional counseling in nutrition and breast cancer awareness was also provided. Over 600 participants attended outreach events and received health counseling on prevention of chronic disease. Most of the participants (> 600) had their BMI, blood pressure, heart rate and glucose measured. Over 160 cholesterol measurements (LDL, HDL and total) were performed. Around 800 educational handouts were provided to participants and local providers to share with the community.