



# UW MIRT 2006 ABSTRACTS

**Risk of Preterm Delivery in Relation to Maternal Low Birth Weight.** \*B De, \*S Lin, V Lohsoonthorn, and MA Williams (University of Washington, Multidisciplinary International Research Training Program, Seattle, WA and Faculty of Medicine, King Chulalongkorn University, Bangkok, Thailand)

**Objective:** We examined the relationship between maternal low birth weight and preterm delivery risk.

**Methods:** Information concerning maternal birth weight was collected during in-person interviews. Logistic regression was used to estimate odds ratios (OR) and 95% confidence intervals (95% CI). Preterm delivery cases were studied in aggregate, in subgroups (spontaneous preterm labor, preterm premature rupture of membranes, medically induced preterm delivery, moderate preterm delivery [gestational age at delivery 34-36 weeks], and very preterm delivery [gestational age at delivery <34 weeks]).

**Results:** After adjusting for confounders, women weighing <2,500 g at birth had a 1.54-fold increased risk of preterm delivery versus women weighing  $\geq 2,500$  g (95% CI 0.97-2.44). Maternal low birth weight was associated with a 2-fold increased risk of spontaneous preterm delivery (95% CI 1.03-3.89), but weakly associated with preterm premature rupture of membranes (OR=1.44; 95% CI 0.67-3.09) and medically induced preterm delivery (OR=1.10; 95% CI 0.43-2.82). Maternal low birth weight was more strongly associated with very preterm delivery (OR=1.94) than with moderate preterm delivery (OR=1.46). Women weighing <2,500 g at birth and who became overweight (pre-pregnancy body mass index,  $\geq 25$  kg/m<sup>2</sup>) before pregnancy had a 2.17-fold increased risk of preterm delivery (95% CI 1.00-4.72) versus women weighing  $\geq 2,500$  g at birth and who were lean prior to pregnancy (<25 kg/m<sup>2</sup>).

**Conclusions:** Results confirm earlier findings linking maternal low birth weight with future risk of preterm delivery.

**Risk of Preterm Delivery in Relation to Vaginal Bleeding in Early Pregnancy.** \*R Hossain, \*T Harris, V Lohsoonthorn, and MA Williams (University of Washington, Multidisciplinary International Research Training Program, Seattle, WA and Faculty of Medicine, King Chulalongkorn University, Bangkok, Thailand)

**Objective:** To examine the relationship between vaginal bleeding during early pregnancy and preterm delivery.

**Methods:** Study subjects (N=2,678) provided information regarding socio-demographic, biomedical, and lifestyle characteristics. Logistic regression was used to estimate odds ratios (OR) and 95% confidence intervals (95%CI).

**Results:** Any vaginal bleeding in early pregnancy was associated with a 1.57 fold increased risk of preterm delivery (95%CI: 1.16- 2.11). Vaginal bleeding was most strongly related with spontaneous preterm labor (OR=2.10) and weakly associated with preterm premature rupture of membrane (OR=1.36) and medically induced preterm delivery (OR=1.32). As compared to women with no bleeding, those who bled during the first and second trimesters had a 6.24-fold increased risk of spontaneous preterm labor; and 2-3-fold increased risk of medically induced preterm delivery and preterm premature rupture of membrane, respectively.

**Conclusion:** Vaginal bleeding, particularly bleeding that persists across the first two trimesters, is associated with an increased risk of preterm delivery.

**Prevalence and Risk Factors of Gender Based Violence among Female College Students in Awassa, Ethiopia.** \*D Arnold, B Gelaye, M Goshu, Y Berhane, and MA. Williams (Multidisciplinary International Research Training Program, University of Washington, Seattle, WA, USA and Department of Community Health, Addis Ababa University, Addis Ababa, Ethiopia)

**Purpose:** To determine the prevalence and identify risk factors of gender-based violence among female college students in Ethiopia.

**Methods:** 1330 students from colleges in Awassa, Ethiopia completed a self-administered questionnaire which collected information on experience with gender-based violence during lifetime, since enrolling in college, and current academic year. Logistic regression was used to estimate odds ratios (OR) and 95% confidence intervals (95% CI).

**Results:** The lifetime prevalence of gender-based violence was 59.9 % (95% CI 57.2%-62.6%). 46.1% (95% CI 43.3%-48.9%) of participants reported experiencing gender-based violence since enrolling in college, and the prevalence was 40.3% (95% CI 37.5-43.1%) during the current academic year. The lifetime prevalence of sexual violence was 54.9% (95% CI 52.0%-57.8%), with 35.3% (95% CI 32.5%-38.1%) of students reported sexual abuse during the current academic year. Protestant religious affiliation (OR=1.8; 95% CI 1.3-2.5), childhood rural residence (OR=1.4; 95% CI 1.0-2.0), alcohol consumption (OR=1.7; 95% CI 1.1-2.6), combined alcohol and khat (a natural stimulant) consumption (OR=1.8, 95% CI 1.0-3.0), and witnessing domestic violence as a child (OR=2.2; 95% CI 1.6-3.1) were risk factors of gender-based violence.

**Conclusions:** Gender-based violence, common among students, is associated with rural childhood residence, witnessing of violence, alcohol and khat consumption. Programs aimed at preventing gender-based violence must address these and other identified determinants of violence against young women.

**Prevalence and Risk Factors of Gender-Based Violence Committed by Male College Students in Awassa, Ethiopia** \*M Philpart, M Goshu, B Gelaye, MA Williams, and Y Berhane(MIRT Program, University of Washington, Seattle, WA, USA and Department of Community Health, Addis Ababa University, Addis Ababa, Ethiopia)

**Objective:** To determine the prevalence and risk factors for the perpetration of gender-based violence.

**Methods:** Male undergraduate students (N=1,378) from colleges in Awassa, Ethiopia participated in the study. Data concerning socio-demographic, lifestyle habits and perpetration of gender-based violence during the current academic year was collected. Logistic regression procedures were used to estimate odds ratios (OR) and 95% confidence intervals (95% CI).

**Results:** Nearly a quarter (24.4%; 95% CI 22.1-26.7%) of students admitted perpetrating acts of gender-based violence. Approximately 15.8% (95% CI 13.7-17.9%) reported physically abusing; and 16.9% (95% CI 14.8-19.0%) reported committing acts of sexual violence against an intimate partner or non-partner. Rape was reported by 3.2% (95% CI 2.2-4.2%) of students. Unmarried students with female intimate partners were more likely than those without partners to be physically or sexually abusive(OR=1.50-1.70). Alcohol consumption (OR=2.05; 95% CI 1.36-3.09), khat use [a natural stimulant with amphetamine-like effects] (OR=1.99; 95% CI 1.04-3.80), combined use of alcohol and khat (OR=2.79; 95% CI 1.76-4.44), and witnessing violence as a child (OR=1.93; 95% CI 1.38-2.70) were risk factors for committing gender-based violent acts.

**Conclusions:** The risk of being physically or sexually violent was associated with marital status, witnessing parental violence as a child, alcohol and khat consumption. Greater understanding of male factors associated with physical and sexual violent behaviors are needed to develop effective prevention programs.

## **Risk Factors for Depression in Caregivers of Children with Disabilities in Patagonia, Chile.**

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**Objective:** Although major depression has been reported as the fourth-ranked cause world-wide of disability and premature death, the prevalence and risk factors for depression specific to many ethnic and occupational subgroups have been understudied. The aim of this study was to identify risk factors for depression in the caregivers of children with disabilities located in Patagonia, Chile **Methods:** In this observational cross-sectional study, a convenience sample of 107 adult caregivers between ages 19 and 64 who care for disabled children presenting for rehabilitation therapy at a free rehabilitation clinic in Punta Arenas (Patagonia) were interviewed in Spanish during scheduled visits in July and August 2006. A structured questionnaire with Diagnostic and Statistical Manual of Mental Disorders-III (DSM-III) criteria for depression was used to determine the depressive scores of the caregivers of children including those with cerebral palsy, genetic disorders, mental retardation, musculoskeletal disabilities, developmental delays, and complications arising from prematurity. **Results:** Risk factors were assessed using multiple logistic regression in unadjusted models and those adjusted for age, gender and education. Caregivers were a mean age of 36.5 years (SD 9.4) and 81.3% were female. More than two-thirds of caregivers were not depressed based on DSM criteria; 26 (24.3%) were found to have probable depression and only 6 (5.6%) were definitely depressed. Gender, age, and education were all related to the risk of depression. In adjusted models, women were almost five times as likely as men to be probably or definitely depressed (OR 4.7, 95% CI: 1.02- 21.8). Caregivers over age 45 were more than three times as likely to be depressed than those under age 35 (OR: 3.7, 95% CI: 1.2-11.6) and college graduates were 75% less likely to be depressed (OR: 0.25, 95% CI: 0.07-0.90) than those with less than a high school education. Adjusted for age, gender and education, diagnosis of child and number of children in the family were not associated with depression in caregivers. **Conclusion:** Although sample size was limited, these results indicate that traditional socioeconomic risk factors for depression affect caregivers of children with disabilities and should be used to identify those likely to benefit from screening and treatment.

**Factors Related to Children's Missed Therapy Visits at a Free Rehabilitation Clinic Serving Punta Arenas, Chile.** Alisa Byquist, Tess Lang, Annette L. Fitzpatrick, Mauricio Diaz, Juan Carlos Velez. (University of Washington, Multidisciplinary International Research Training Program, Seattle, WA, Corporacion De Rehabilitacion Club De Leones Cruz Del Sur, Punta Arenas, Chile)

**Objective:** To describe and classify the most significant barriers to accessing healthcare faced by caregivers of children receiving therapy for physical and mental disabilities in a small non-profit rehabilitation clinic in Punta Arenas, Chile. As a clinic specializing in rehabilitation services such as physical, occupational, and speech therapy, the patient population was composed largely of children with disabilities such as Down's Syndrome, Cerebral Palsy, and developmental delays. Continuity of care is essential to providing effective treatment of such disabilities, yet the clinic has a persistent problem with patients failing to attend their scheduled appointments which are provided at no cost to the patient. **Methods:** This cross-sectional study was conducted among 112 caregivers of children age 6-13 from July 7, 2006, to August 16, 2006. Using data collected from these interviews as well as information obtained from a pre-existing database, including attendance records, demographic information, and clinical data. Attendance records were used to categorize patients over the past year as having poor (< 50% attendance at scheduled visits), moderate (50-75% attendance), and good (> 75% attendance) at therapy appointments. Questions were asked regarding barriers to clinic access such as transportation, economic factors, the location of the clinic, and availability of childcare. **Results:** Factors related to poor attendance were assessed using chi-square analyses and logistic regression. Family income (per capita) and caregiver education were both significantly related to patient therapy attendance in bivariate analyses (chi-square  $p = .002$ ). Across all attendance groups, transportation problems were reported to be the most important physical barriers that were perceived to impede accessing the clinic, followed closely by the clinic location. However, these issues were not associated with poor attendance at the clinic. Perceptions of the importance of the caregiver's job was the only perceived barrier found to be associated with poor clinic attendance after adjustment for demographics ( $p = .04$ ). **Conclusion:** These findings are significant as they offer critical information on caregiver perceptions of the clinic's services as well as the most common physical obstacles faced by its patients. Beginning to understand these barriers could help the clinic identify appropriate interventions and develop strategies to improve clinic access and services.

**Patterns of Bottle Feeding and Use of Pacifiers in Preschool Children Residing in Patagonia, Chile.** Chanaye Jackson, Clarita Barbosa, MD, Sandra Vasquez, BS, SP, Annette Fitzpatrick, PhD, Juan Carlos Velez, MD University of Washington, Multidisciplinary International Research Training Program, Seattle, WA, Corporacion De Rehabilitacion Club De Leones Cruz Del Sur, Punta Arenas, Chile)

**Objective:** The length of time that an infant or child spends sucking, either for nutritive (breast or bottle-feeding) or nonnutritive (pacifiers and fingers) purposes, may later influence the development of the mouth and palate. While both types are important for healthy development of a child, the extended use of bottles for feeding and pacifiers as soothers for infants may hamper the development of orofacial muscles and dentofacial structures. Thus, it is important that use of bottles and pacifiers be monitored for evaluation as risk factors related to oral pathology. The purpose of this study was to provide preliminary data on type and length of sucking behavior in pre-school children residing in Patagonia, Chile. **Methods:** Self-reported questionnaires were completed by 34 parents or caregivers of children ages 3-5 years attending pre-schools in Punta Arenas or Puerta Natales, Magellanes (Patagonia), Chile. In addition to demographics, information was collected on amount of time the child was breast fed, when bottle-feeding was initiated and stopped, and when pacifier use was initiated and stopped.

**Results:** The children were a mean age of 4.3 years (SD 0.8) and 24 (70.6%) were boys. At the time of the child's birth, the mean age the mother was 25.4 years (SD 5.7) ranging from 15 to 38 years. While all but one child had utilized a bottle for feeding, less than half (41.2%) had ever used a pacifier. Breastfeeding ended at an average age of 10.0 months (SD 9.3). The average age for starting and stopping bottle feeding was 6.4 months (SD 7.2) and 16.5 months (SD 15.2 months). Average age for starting and stopping pacifier use was 1.9 months (SD 2.5) and 20.4 months (SD 14.1). While only 3 children still used the pacifier, almost half (48.4%) still utilized the bottle. Only 6 children (17.6%) sucked their fingers. Adjusted for age of child, mother's education was associated with current use of a bottle. Mother's education, father's education and gender of child were not found to be related. **Conclusion:** These data will be used in a future evaluation to assess if bottle feeding or pacifier use are associated with speech pathology in Chilean children.

**Perceptions & Impact of Pesticide Exposure on the Health Outcomes, Ecuador .** Ines Gardilic, Jose Suarez, Michelle A. Williams. (University of Washington, Multidisciplinary International Research Training Program, Seattle, WA, Foundation Cimas del Ecuador, Ecuador)

**Objective:** To evaluate perceptions of the forms and impacts of pesticide exposure on the health of the population of Pedro Moncayo with the participation of local actors.

**Methods:** Qualitative data related to perceptions and knowledge of pesticide use in agriculture and the floriculture industry was collected from June to August 2006 through a Participative Action Research model, incorporating civil society organizations as co-researchers. Data was collected primarily through interviews that were guided by collectively identified research goals covering a broad range of health, environmental, and political topics.

**Results:** Every Participant interviewed believed that pesticides had a negative effect on human health. While interviewees named positive economic benefits of floriculture industry activity and pesticide use, there was a clear understanding and concern related to the negative impacts on health and the environment. Nobody interviewed perceived local health services to be sufficient to treat those affected by pesticide exposure. Floriculture workers had the most contact with pesticides. Protective equipment was perceived as optional in floriculture work and completely absent in agricultural work.

**Discussion:** Awareness of negative impacts and numerous pathways of pesticide exposure were articulated by many of the participants. Critiques of the practices of the floriculture industry focused on health and environmental concerns, naming them as issues that needed to be prioritized in policy making. Social changes attributed to industry development were also identified. The collectively created goal of a community toxicology information center was named as a vehicle for addressing these issues.

**Conclusion:** The use of pesticides in agriculture and floriculture activity is impacting the health and environment of Pedro Moncayo in numerous ways. Future interventions into the negative effects of pesticide use need to involve community members in development and implementation of solutions that address health, culture, education and corporate accountability.

**Depressive Symptoms Among Female College Students Experiencing Gender-Based Violence.** \*B Gelaye, M Goshu, D Arnold, MA Williams, and Y Berhane. (Multidisciplinary International Research Training Program, University of Washington, Seattle, Washington, USA and Department of Community Health, Addis Ababa University, Addis Ababa, Ethiopia)

**Background:** Gender-based violence is increasingly identified as the most prevalent and emblematic gender-based cause of depression in women. The objective of this study was to assess risk of depression and depressive symptoms among female university students who were victims of gender-based violence.

**Methods:** A total of 1,102 undergraduate students in Awassa, Ethiopia completed a self-administered questionnaire which collected information on exposure to gender-based violence during the current academic year. Depression and depressive symptoms were evaluated using a nine-item depression module of the Patient Health Questionnaire (PHQ-9). Logistic regression was used to estimate odds ratios (OR) and 95% confidence intervals (95%CI).

**Results:** Students who reported experiencing any gender-based violence were nearly twice as likely to be classified as having moderate depression during the academic year (OR = 1.98; 95% CI 1.39-2.82) as compared with non-abused students. Any gender-based violence was also associated with increased risk of moderately severe depression (OR=1.95; 95%CI 1.20-3.17). Compared with non-abused students, those experiencing both physical and sexual abuse were 4 times more likely to report moderately severe (OR=4.32; 95%CI 2.00-9.31) or severe depressive symptoms (OR=4.19; 95%CI 1.01-17.43).

**Conclusions:** Our findings, consistent with previous studies, extend the literature to reflect experiences of Ethiopian women and support the thesis that women's mental health status is adversely affected by exposure to gender-based violence.