UW MIRT 2007 Abstracts

Risk of Dyslipidemia in Relation to Level Of Physical Activity among Thai Professional and Office Workers.

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Objective and Methods: We completed a cross-sectional study of 1,608 Thai participants (536 men and 1072 women) receiving annual health check-ups to evaluate the relation between physical activity levels and fasting serum concentrations of total cholesterol (TCH), triglyceride (TG), high density lipoprotein-cholesterol (HDL-C), and the total cholesterol: high density lipoprotein-cholesterol (TCH:HDL-C) ratio. Physical activity levels were assessed using a self-administered questionnaire administered at the time of blood collection.

Results: After controlling for confounders, men who reported high physical activity levels had on average a 3.42 mg/dl higher (p=0.020) in HDL-C concentrations, when compared to men who reported low physical activity levels. Higher mean HDL-C concentrations were also observed for women who reported high physical activity levels, when compared with their less active counterparts (4.24 mg/dl, p=0.004). TG concentrations were 30.92 mg/dl lower in men (p=0.029) and 12.83 mg/dl lower in women (p=0.003) who had high physical activity levels when compared with less active individuals. Men who reported high physical activity levels, compared with those who reported low physical activity levels, had a 59% reduction in risk for hypertriglyceridemia (OR=0.41, 95% CI: 0.24-0.70). The corresponding OR for women was 0.43 (95%CI: 0.21-0.88). No association was found between physical activity levels and TCH concentrations.

Conclusion: Overall, these data suggest that habitually active men and women are less likely to have hypertriglyceridemia and low HDL-C concentrations. The favorable effects of physical activity on lipid and lipoprotein concentrations are consistent with the evidence documenting the cardiovascular health benefits of physically active lifestyles.

Association Between Elevated Liver Enzymes and Metabolic Syndrome Among Thai Adults.

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Objective: Metabolic syndrome (MetS), a cluster of metabolic abnormalities, is associated with an increased risk of cardiovascular disease and type 2 diabetes.

Methods: We conducted a cross-sectional study of 1,391 Thai patients receiving annual health check-ups to determine the association between elevated liver marker concentrations (alanine aminotransferase [ALT], aspartate aminotransferase [AST], and alkaline phosphatase [ALK]) and various components of MetS.

Results: Overall, mean concentrations of AST, ALT and ALK increased and mean AST:ALT ratio decreased with increasing presence of metabolic abnormalities (p-value=0.059 for AST in men, all other p-values <0.001). After adjusting for confounders, men with ALT concentrations in the extreme quartiles (>40 units/l), had a 2.79-fold increased risk of MetS (95% CI 0.14-0.89), as compared with men who had values in the lowest quartile (≤21 units/l). The OR for extreme quartiles of ALK concentrations was 3.44 (95% CI 1.41-8.42). In women, elevated ALT concentrations were also associated with MetS risk. Those with the highest ALT concentrations (>23 units/l) had a 2.55-fold increased risk of MetS (95% CI 1.22-5.34) as compared to women with lowest concentrations (≤13 units/l). Positive associations of similar magnitude and directions between liver markers and MetS risk were evident when analyses were repeated after stratification based on participants' self-reported alcohol consumption status.

Conclusion: These findings add to an emerging body of literature that suggests elevated liver enzymes may be related with MetS risk. However, prospective studies are needed to more fully determine the practical value of elevated liver enzymes as a clinical risk predictor of MetS and related disorders among Thai adults.

Comparison of Waist Circumference, Body Mass Index, Percent Body Fat and Other Measure of Adiposity in Identifying Cardiovascular Disease Risks among Thai Adults. L Paniagua, V Lohsoonthorn, S Lertmaharit, W Jiamjarasrangsi, MA. Williams. (University of Washington, Multidisciplinary International Research Training Program, Seattle, WA and Faculty of Medicine,King Chulalongkorn University, Bangkok, Thailand)

Background: Several measurements of overall adiposity and body fat distribution have been used in epidemiologic studies. It remains unclear however, whether body mass index or other measures are most strongly associated with cardiovascular risk factors in Asian populations.
Objective: We compared the abilities of body mass index, percent body fat, waist circumference, waist-hip ratio and waist-height ratio to identify cardiovascular disease risk factors.
Methods: This cross-sectional study is comprised of 1,391 Thai participants (451 men and 940 women) who had annual health exam in a mobile health clinic. Spearman's rank correlation was used to determine the association of the five anthropometric indices with metabolic parameters including fasting plasma glucose, triglyceride, high density lipoprotein and blood pressure. The prevalence of cardiovascular disease risk factors was determined according to tertile of each anthropometric measure. Receiver operating characteristic (ROC) curves were plotted to compare anthropometric measure as predictors of the prevalence of cardiovascular risk factors. We calculated the area under the curve as a summary estimate of discrimination.
Results: Metabolic parameters were more strongly associated with %BF and WHR and least correlated with BMI in men. Among women, BMI was most strongly correlated with metabolic parameters. In both genders, the prevalence of cardiovascular disease risk factors increased across successive tertiles for each anthropometric measure. Review of ROC curves indicated that %BF and WHR performed slightly better than other measures in identifying differences in CVD risk factors among men. BMI performed at least as well or better than other measures of adiposity among women.
Conclusions: These findings confirm high correlations between anthropometric measures and metabolic parameters. BMI, WC and other measures were not materially different in identifying cardiovascular disease risk factors. Although small differences were observed, the magnitudes of those differences are not likely to be of public health or clinical significance.

The Relationship Bottle Feeding and Other Sucking Behaviors with Speech Pathology in Pategonian Preschoolers. MA. Parada, C Barbosa, S Vasquez Guerrero., JC Velez, C Jackson, D Yanez, AL. Fitzpatrick (University of Washington, Multidisciplinary International Research Training Program, Seattle, WA, Corporacion De Rehabilitacion Club De Leones Cruz Del Sur, Punta Arenas, Chile)

Objective: Early reports in the literature suggest that sucking behaviors, including breast-feeding, use of bottles and pacifiers, may impact development of oral muscles and quality of speech in young children. We investigated associations between use of bottles, pacifiers, and other sucking behaviors with speech patholologies in children attending three preschools in Punta Arenas (Pategonia), Chile.

Methods: Information on infant feeding and sucking behaviors, including age at starting and stopping breast- and bottle-feeding, pacifier use, and other sucking behaviors, was collected from self-administered questionnaires completed by parents. Evaluation of speech problems was conducted at the preschools with subsequent scoring by a licensed speech pathologist using age-normative standards.

Results: A total of 128 three- to five-year olds were assessed, 46% girls and 54% boys. The children were breast fed an average of 25.2 (SD 9.6) months and used a bottle 24.4 (SD 15.2) months. Fifty-three children (41.7%) had or currently used a pacifier for an average of 11.4 (SD 17.3) months and 23 (18.3) were reported to have sucked their fingers. Delayed use of a bottle until after 9 months protected children from subsequent speech pathologies by almost 70% (OR: 0.32, 95% CI: 0.10-0.98). A three-fold increased risk of speech pathology was found with use of a pacifier for more than three years (OR: 3.50, 95% CI: 1.11-11.03) and any finger-sucking behavior (OR: 3.04, 95% CI:1.15, 8.04).

Conclusion: Results suggest that extended use of sucking outside of breast-feeding may have subsequent detrimental effects on speech development in young children.

Depression in Caregivers of Children with Disabilities. KA Loya, TC. Lang, AC. Byquist, JC Velez, A Yalinic, M Diaz, D Yanez, AL. Fitzpatrick. (University of Washington, Multidisciplinary International Research Training Program, Seattle, WA, Corporacion De Rehabilitacion Club De Leones Cruz Del Sur, Punta Arenas, Chile)

Objective: Research has indicated that parents of children with disabilities are often confronted with a variety of family life problems and emotional difficulties beyond that of their peers. In this study we attempted to identify risk factors for depression in caregivers of children with disabilities receiving therapy at a rehabilitation center in Punta Arenas (Pategonia), Chile.

Methods: We interviewed 142 primary caregivers mean age 35.1 years (SD 8.9) and assessed level of depression using DSM-IV criteria as well as other information including demographics, family situation, and perceptions of the care their child received.

Results: Eighty-seven percent of those evaluated were women compared to 13% men. Diagnoses in the children, mean age 5.3 (SD 3.8) years, included developmental disabilities, (20.4%), cerebral palsy (19.0%), neurological disorders (18.3%), and mental retardation (14.1%). Overall, 33.8% of caregivers were classified with probable depression and 14.1% demonstrated depression. Using multivariate logistic regression we found that men were far less likely to be depressed compared to women (OR: 0.08, 95% CI: 0.01-0.64). While total number of children in the family did not affect depression, parents with 2 or more children under age 5 years were more than four times as likely to be depressed as those with no younger children (OR: 4.5, 95% CI: 1.06-19.06). Dissatisfaction with their child's therapy also significantly increased risk of depression up to five times (satisfaction with service OR: 5.42, 95% CI: 1.50-19.56).

Conclusion: These results suggest that the depressive state of caregivers is very much dependent upon their perception of the care their child receives.

Associations between Witnessing Parental Violence and Experiencing Symptoms of Depression among College Students. S Nicodimos, B Gelaye, MA Williams, Y Berhane. (University of Washington, Multidisciplinary International Research Training Program, Seattle, WA, Addis Continental Institute of Public Health, Addis Ababa, Ethiopia)

Objective: This cross-sectional study examines the association between witnessing parental violence in childhood and experience of depressive symptoms during academic year among Awassa college students in Ethiopia.

Methods: Undergraduate students from private and public in Awassa, Ethiopia participated in the study. A total of 1,330 students completed a self-administered questionnaire that collected information concerning witnessing parental violence during their childhood, experience of depressive symptoms, socio-demographic and life style characteristics. Logistic regression was used to estimate odds ratios (OR) and 95% confidence intervals (95% CI).

Results: Approximately 22.7% female participants and 27.1% of the male participants reported witnessing parental violence as a child. Females who witnessed parental violence as children were more likely twice as likely to report moderate (OR=2.04; 95% CI 1.32 - 3.15), or moderately severe depression (OR=3.02; 95% CI (1.67 - 5.47) as compared to those who did not witness parental violence. The corresponding ORs were 1.71 (95% CI 1.13 - 2.59) and 2.42 (95% CI 1.41 - 4.13) for male students. Female students who witnessed parental violence were 2.37-times (OR= 2.37, 95% CI 1.26-4.44) more likely to report feeling bad about themselves 2.62 times (OR= 2.62, 95% CI 1.66 - 4.14) more likely to have trouble in concentrating compared with those who did not witness parental violence. Male students who witnessed parental violence were almost twice as likely to report having suicidal thoughts compared with their counterparts who did not witness parental violence (OR= 1.97, 95% CI 1.16 - 3.34).

Conclusion: Witnessing parental violence among college students is associated with symptoms of depression, lower self esteem and suicidal ideation. Intervention programs aimed toward eradicating gender-based violence must also address issues concerning witnessing parental violence during childhood and treatment methods for college students that are at risk for depression.

The Relationship of Anger Expression, Violent Behavior, and Symptoms of Depression among Male College Students. D Terasaki, B Gelaye, Y Berhane, MA. Williams. (University of Washington, Multidisciplinary International Research Training Program, Seattle, WA, Addis Continental Institute of Public Health, Addis Ababa, Ethiopia)

Objective: To assess the associations of anger expression and violent behavior with symptoms of depression among college students.

Methods: A cross-sectional study among 1,294 male college students in Awassa, Ethiopia was conducted in June, 2006. A self administered questionnaire was used to collect information concerning symptoms of depression, violent acts, anger expression, socio-demographic and life style characteristics. Multivariable logistic regression procedures were used to calculate adjusted odds ratios (OR) and 95% confidence intervals (95% CI).

Results: Approximately 23.6% of participants indicated symptoms of depression, 54.3% of respondents reported committing at least one act of violence in the current year, and 29.3% of respondents reported high (score$\geq$15) levels of anger expression. In multivariate analysis, moderate and high anger-out expression scores maintained significant associations with symptoms of depression. Violent behavior was significantly associated with symptoms of depression in univariate modeling, however it lost its association when other covariates were added to the regression models. The most common expressive behaviors when angry were expressing anger (70.2% responded sometimes, often, or almost always) and being apt to tell someone if annoyed by them (66.2%).

Conclusion: Students symptomatic of depression tended to express high levels of outward anger, and this likely resulted in a high prevalence of violent acts. Violent behavior itself, however, was not significantly associated with depressive symptoms. This would imply that promotion of appropriate anger expression skills, rather than suppression of violent behavior, should be stressed in interventions for students with depression. Specific outward expressions of anger that were deemed more physical and impulsive exhibited more significant associations with symptoms of depression. Further research should be conducted regarding cultural characteristics that predispose students toward particular forms of anger expression and depression.

Attitudes and Perceptions of Gender Based Violence among College Students in Awassa,

Ethiopia. N Bernal, B Gelaye, Y Berhane, MA Williams. (University of Washington, Multidisciplinary International Research Training Program, Seattle, WA, Addis Continental Institute of Public Health, Addis Ababa, Ethiopia)

Objective: Gender based violence (GBV) is universally understood to encompass the physical, sexual, and psychological mistreatment from intimate partners or non-partners resulting in psychological harm, physical injury, or death. In this study, we examined the possible factors that may play a role in shaping the perceptions that the college-aged students of Ethiopia have toward GBV. More specifically, we investigated the relationships between certain lifestyle characteristics, religious affiliations, education levels, childhood residences, and age to beliefs supportive of GBV.

Methods: This cross sectional study was conducted among 2537 college students in Awassa, Ethiopia during the months of June and July, 2006. A self-administered questionnaire was used to collect data concerning perception and attitudes of gender based violence.

Results: Overall, the findings present a male-biased view in the sense that males were more likely to be supportive of male dominance in a relationship. One stark contrast is displayed in the question regarding whether "if a husband beats his wife, he is showing his love for her." Only 6.8% of the female students agreed with that statement, while 84.0% of the male students agreed with that statement. There is not much of a difference between genders when asked about whether it is "always acceptable for a husband/boyfriend to hit his wife/girlfriend": 3.4 and 4.1% for females and 4.0 and 4.7% for males, for the respective questions. There was, however, a difference noted in the statement it is "sometimes acceptable for a husband/boyfriend to hit his wife/girlfriend." Males were twice as likely to agree that it is sometimes acceptable for a husband to hit his wife than females, and 70% more likely than females to agree that it is sometimes acceptable for a boyfriend to hit his girlfriend. As many as 18.6% of females and 84.2% of males were identified as "embracing "the male dominant point of view. Women holding these beliefs were more likely to have been raised in a rural setting and consume alcohol. The male sample shows a strong statistical significance (p-value<.001) when education levels are considered. Khat chewing and perceptions supportive of GBV are also shown to be statistically associated with males (p-value<.01).

Conclusion: These findings summarize the need to raise awareness in the collegiate student body of this matter in order to help fight this problem.