Title

Self-efficacy and participation in diabetes self-care among older African-Americans and Latinos

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have a firm understanding of the systemic issues contributing to such behaviors and advocate for system-wide changes that promote a healthier lifestyle. A good example is obesity. The causes of the obesity epidemic are complex and multi-factorial involving the interplay of genetic, behavioral, environmental and social factors. Thus, in order to effectively intervene in controlling obesity, physicians need to not only address issues with individuals but also understand system-based practice issues such as community resources as well as barriers and potential solutions. While physicians are trained in how to address health-risk behaviors such as diet and exercise counseling, systems-based practice issues as outline above are just now beginning to be addressed in medical education. The purpose of our study was to determine how well first-year medical students understand these community issues regarding obesity following an early clinical experience. Such information may be useful in designing curriculum in systems-based practice in undergraduate medical education.

METHODS: Following a week-long community-based primary care experience, 103 first-year medical students were asked to write their responses to: What was the most important health-related behavioral issue leading to illness you observed? What barriers exist in the community to changing this behavior and how may these be overcome? Written responses were analyzed for thematic categories by two reviewers in an iterative process. The two reviewers then coded the students' responses for the presence or absence of the themes. Discrepancies were resolved via consensus.

RESULTS: 48% of the students reported the most important health-related issue to be obesity (inactivity, improper nutrition), 39% reported the use of tobacco (smoking, second hand smoke), and 13% gave various independent responses (stress, unprotected sex, etc.). Being that obesity-related issues were reported the most prevalent we chose to analyze the data further. The leading perceived community barrier to controlling obesity was lack of proper nutrition (51%), this was followed by lack of safe public areas to exercise (9%). 24% of students responses were directed at the level of individuals rather the community (sedimentary lifestyle, lack of desire to exercise and/or eat healthy, lack of time, etc.) Potential solutions included: education (33%), healthy food alternatives (27%), and community-based exercise areas/programs (26%).

CONCLUSIONS: More students listed obesity than tobacco use as the most important health-related issue they observed in an early clinical experience. While Students had a fairly good grasp of community barriers regarding obesity; they did not demonstrate an adequate knowledge of potential community-based solutions. Their main focus was on education rather than on development of community programs or collaborating with existing organizations such as schools, the workplace, or the state. Thus the first-year students appear to not to be thinking on the level of systems-based practice. We plan on introducing students to the concepts of systems-based practice prior to the early clinical experience in the future with the hopes helping them to see the "big picture" of health-related behaviors such as obesity.

SELF-EFFICACY AND PARTICIPATION IN DIABETES SELF-CARE AMONG OLDER AFRICAN-AMERICANS AND LATINOS. C.M. Mangione[1]; M. Seifu[1]; W.N. Steers[1]; A.F. Brown[1]; R. Brusuelas[2]; K. Norris[3]; M.B. Davidson[3]; R.M. Anderson[4]; T. Seeman[1]; C.A. Sarkisian[1]. [1]University of California, Los Angeles, Los Angeles, CA; [2]University of California, Los Angeles, 90024, CA; [3]Charles R. Drew University of Medicine and Science, Los Angeles, CA; [4]University of Michigan, Ann Arbor, MI. *(Tracking ID # 154679)*

BACKGROUND: Participation in diabetes self-care such as regular physical activity and self-monitoring of blood glucose (SMBG) improves glycemic control and may decrease serious long-term complications. Self-efficacy, persons' self-confidence in their ability to perform behaviors, may be an important mediator of participation in self-care among older African Americans and Latinos. Using baseline data from a community-based randomized trial of a behavioral intervention, we compared levels of self-efficacy and participation in self-care among older African Americans and Latinos with diabetes. We hypothesized that self-efficacy and participation in self-care would vary by race/ethnicity, and that higher self-efficacy would be associated with greater participation in self-care for both groups.

METHODS: African Americans (n=195) and Spanish-speaking Latinos (n=312) were recruited from senior centers, churches, and community clinics in Los Angeles between Feb. 2004 and Sept. 2005. Eligible participants had to speak English or Spanish, be 55 years or older, and have HbA1c 8% or higher. Through face-to-face interviews, self-efficacy was measured using Diabetes Empowerment Scale-Short Form and Self-Efficacy to Perform Self-Management Behaviors scale. Participation in self-care was measured with the revised Summary of Diabetes Self-Care Activities. To compare levels of self-efficacy and participation in self-care by race/ethnicity, we constructed multivariate models for each of the 4 self-efficacy domains (for diabetes care, for exercise, for MD communication, and for participation in social and recreational activities) and participation in 5 self-care activities (days per week of following a diet, exercising, SMBG, performing foot care, and taking diabetes medications). All models included age, sex, race/ethnicity, income, education, smoking, diabetes treatment, and medical comorbidities.

RESULTS: Mean age was 63.3+/−6.2 years, 71% were female, and mean HbA1c was 9.66%. Adjusted mean levels of self-efficacy for 3 of 4 domains were similar and in the upper quartile of the possible range for both Latinos and African Americans. However, Latinos had significantly higher self-efficacy for exercising. African Americans reported more participation than Latinos in 2 of the 5 self-care behaviors: following a diabetes diet (4.0 vs. 3.1 days/wk. p=0.007) and SMBG (4.0 vs. 2.8 days/wk., p=0.0004). In adjusted models, diabetes specific self-efficacy correlated at p<0.05 for all of the self-care activities except for exercise. Self-efficacy for exercise and for social and recreational activities correlated with participation in exercise (p=0.0003, p=0.02

respectively), and self-efficacy for MD communication correlated with taking diabetes medications (p=0.03). The correlations were similar for both groups.

CONCLUSIONS: Pre-intervention levels of self-efficacy were similar for the older African Americans and Latinos recruited for our community-based trial. However two important self-care behaviors, following a diabetes diet and SMBG were performed less frequently among the Latinos. Among both groups, higher self-efficacy was associated with more participation in key self-care practices. This finding suggests that interventions designed to enhance self-efficacy may increase participation in self-care behaviors that may reduce complications from diabetes among urban older African Americans and Latinos.

SELF-REPORTED INFERTILITY AND LIPID RISK FACTORS IN A POPULATION-BASED STUDY OF WOMEN: THE CARDIA WOMEN'S STUDY. M.F. Wellons[1]; E.P. Gunderson[2]; C. Lewis[1]; S. Person[1]; B. Sternfeld[2]; D.S. Siscovick[3]. [1]University of Alabama at Birmingham, Birmingham, AL; [2]Kaiser Permanente Division of Research, Oakland, CA; [3]University of Washington, Seattle, WA. *(Tracking ID # 151510)*

BACKGROUND: The 2002 National Survey of Family Growth revealed that 7% of partnered women were experiencing infertility: i.e., that during the previous 12 months, while continuously married or cohabiting and not using contraception, they had not become pregnant. Infertility is caused by many conditions including polycystic ovary syndrome (PCOS) and premature ovarian failure (POF) and is associated with smoking and obesity. In several studies, PCOS and POF have been associated with abnormal lipid levels. However, they occur in <5% of the female population. We hypothesize that infertility is associated with increased cardiovascular risk factors, specifically abnormal lipid levels, even after controlling for PCOS, menopause, smoking, and obesity.

METHODS: This is a cross-sectional study of a community-based sample of 1163 women who participated in the CARDIA Women's Study (CWS) at year 16 of CARDIA. CWS enrolled equal proportions of AA and Caucasian women ranging in age from 34–46. Women were asked multiple questions about their reproductive health including "Have you and your male partner ever had unprotected sexual intercourse for at least 12 months without becoming pregnant" (i.e., infertility). Women who reported current pregnancy, lactation, a diagnosis of PCOS; lacked menses for 12 months and had a follicular phase FSH of >40 (i.e., menopause); or lacked complete fasting laboratory data were excluded. Laboratory and risk factor data were assessed using year 15 data. HDL and LDL cholesterol, triglycerides, age, smoking status, body mass index (BMI), and parity were compared in women with infertility vs women without infertility. Multiple regression modeling was performed with lipids as dependent variables and with infertility, smoking, BMI, and parity introduced sequentially as independent variables and forced into the model.

RESULTS: After exclusion criteria were applied, 999 women remained. 365 (36%) reported infertility. Those with infertility were similar in age (42.0 vs 42.2, p=0.47) but more likely to currently smoke (28% vs 16%, p<0.01) than those without infertility. They had a higher BMI (30 vs. 29, p=0.04) and were more likely to be AA (58% vs. 48%, p=0.04). They had lower HDL (52 vs. 55 mg/dl, p<0.01) a trend toward higher triglycerides (90 vs. 84 mg/dl, p=0.08), but did no difference in LDL (108 vs. 109, p=0.70). In multiple regression modeling, infertility was associated with lower HDL (p<0.01) but not higher triglycerides, after adjusting for smoking. The association with HDL (p<0.05) persisted after adding BMI and parity (0 vs. >0) to the model.

CONCLUSIONS: CWS women had frequently experienced infertility - likely related to the older age of the women when the question was asked. As expected, women who had experienced infertility smoked more and had a higher BMI than those who had not. Independently, they had a lower HDL. In the primary care setting, infertility may warrant investigation of lipid risk factors as well as counseling on modifiable behaviors such as smoking and weight control.

SENSITIVITY AND SPECIFICITY OF A QUANTITATIVE D-DIMER LATEX IMMUNOAS-SAY FOR THE DIAGNOSIS OF ACUTE PULMONARY EMBOLISM AS DEFINED BY MULTIDETECTOR-ROW COMPUTED TOMOGRAPHIC ANGIOGRAPHY. D.A. Froehling[1]; P.R. Daniels[1]; S.J. Swensen[1]; J.A. Heit[1]; J.N. Mandrekar[1]; J.H. Ryu[1]; P.L. Elkin[1]. [1]Mayo Clinic, Rochester, MN. *(Tracking ID # 151262)*

BACKGROUND: Pulmonary embolism is a common life-threatening problem in clinical medicine. The diagnosis of this disorder is often problematic. The utility of the quantitative D-dimer latex immunoassay in the diagnosis of acute pulmonary embolism is unclear. In this retrospective study we measured the sensitivity and specificity of the plasma fibrin quantitative D-dimer latex immunoassay for the diagnosis of acute pulmonary embolism using multidetector-row computed tomographic (CT) angiography as the diagnostic reference standard.

METHODS: From August 3, 2001 to November 10, 2003 all inpatients and outpatients who had both quantitative D-dimer latex immunoassay testing and mutidetector-row CT angiography for suspected acute pulmonary embolism were selected for this study. The D-dimer assay results were compared with the CT angiographic diagnoses. The utility of all D-dimer potential discriminate values was analyzed.

RESULTS: Of 1355 CT studies 208 (15%) were positive for acute pulmonary embolism. For all D-dimer discriminate values from <100 ng/ml to >2000 ng/ml the area under the receiver operating curve was 0.71 with a standard error of 0.02. The discriminate value of <300 ng/ml had the highest negative predictive value for the diagnosis of acute pulmonary embolism. Using this value the D-dimer assay was positive for 1032 (76%) of the 1355 patients. For acute pulmonary embolism using this discriminate value the D-dimer assay had a sensitivity of 0.94 (95% confidence interval (CI), 0.89–0.97), a specificity of 0.27