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

Permalink
https://escholarship.org/uc/item/7w45z435

Authors
Mangione, CM
Seifu, M
Steers, WN
et al.

Publication Date
2006-04-01

Peer reviewed
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 multifactorial involving the interplay of genetic, behavioral, environmental and social factors. In order to effectively intervene in 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. Physicians are then in a better position to intervene in obesity by changing the identifiers of these behaviors such as diet and exercise counseling, systems-based practice issues as outlined 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 understood 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 7-week 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 behavior change did you observe 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% have various in-person 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 obesity-related 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 (sedentary lifestyle, lack of desire to exercise and/or eat healthy, lack of time). Potentially modifiable indicators included: education (38%), healthy food alternatives (27%), and community-based exercise areas (26%).

CONCLUSIONS: More students listed obesity than tobacco use as the most important health-related issue they observed 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 concept 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.A. Mangione1, M. Seifu2, C.M. Mangione3, M. Seifu2; W.N. Steers1, A.F. Brown1; R. Brusuelas1, R. Sternfeld1,3; R. Anderson1, M.B. Davidson2; C.R. Drew University of Medicine and Science, Los Angeles, CA; University of California, Los Angeles, CA; 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. We constructed a summary of diabetes self-care behaviors. 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 conducted 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 63.1+/- 6.2 years, 71% were female, and mean HbA1c was 9.66% (80 mmol/l). Approximately 8% of participants had HbA1c > 8% (6.5 mol/l). 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 63.1+/- 6.2 years, 71% were female, and mean HbA1c was 9.66% (80 mmol/l). Approximately 8% of participants had HbA1c > 8% (6.5 mol/l). 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.

SENSITIVITY AND SPECIFICITY OF A QUANTITATIVE D-DIMER LATEX IMMUNOASSAY FOR THE DIAGNOSIS OF ACUTE PULMONARY EMBOLISM AS DEFINED BY MULTIDETECTOR-ROW COMPUTED TOMOGRAPHIC ANGIOGRAPHY
P.D. Fontugne1; P.R. Daniels1; S.J. Swensen1; J.A. Heit1; J.N. Mandrekar1; J.H. Ryu2; P.L. Elin3; Mayo Clinic, Rochester MN. (Tracking ID # 152665)

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 immunon assay in the diagnosis of acute pulmonary embolism is unclear. In this retrospective study we measured the sensitivity and specificity of the plasma fibrin quantitave 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 outpatient, who had both quantitative d-dimer latex immunoassay testing and multidetector-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 diagnostic cutoffs 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. For values of 0.0 ng/ml to < 2000 ng/ml the highest positive or 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 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, 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 supports the need to enhance self-efficacy may increase participation in self-care behaviors that may reduce complications from diabetes among urban older African Americans and Latinos.