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Small Grant Project Outcome Abstract for Funded Projects

Perception of stroke risk and health care follow-up in at-risk women

Jennifer L. Dearborn, MD/MPH Student

Louise M. McCullough, MD, PhD

The University of Connecticut Health Center
Department of Neurology
263 Farmington Ave
Farmington, CT 06030-1840
(860) 679-3186
jdearborn@student.uhc.edu

Area: 1. Primordial and Primary Prevention

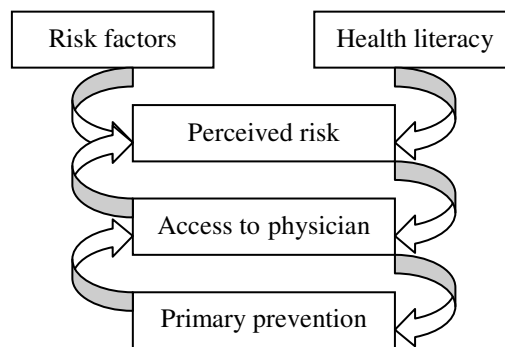
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Background: Stroke is the third leading cause of morbidity and mortality in men and women, behind heart disease and cancer. Although men experience a higher incidence of stroke, women have poorer outcomes and the unique risk factors of pregnancy and hormone therapy. A midlife stroke surge was recently documented in women ages 45 to 54, which may be due to an increase in risk factors in this population.

Objective: To understand the perception of risk in middle-aged women with at least one risk factor for stroke. Also to understand knowledge of stroke in this population so that future health campaigns can be appropriately targeted.

Design: The University of Connecticut Institutional Review Board approved the study. 805 female patients of the University of Connecticut Cardiology Center (ages 50 to 70) received the survey by mail. 129 women responded to the first mailing, for a response rate of 16.7%. Responses from the second mailing are pending. Figure 1 shows some of the predicted relationships among independent and dependent variables addressed.

Figure 1: *The number of stroke risk factors and a woman's health literacy may influence perceived risk of stroke. Access to a physician may influence perceived risk and primary prevention measures, such as lifestyle modification and adherence to medication regimens.*



Data was entered in SPSS and analyzed using descriptive, ANOVA, bivariate correlations, multivariate linear and logistic regression techniques. Relationships were considered significant at p values of less than .05.

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Results: Women identified an average of 2.9 (SD 1.5) out of 6 possible warning signs for stroke. An average of 4.2 (SD 1.7) out of 11 possible modifiable risk factors were identified. Women themselves had an average of 3.2 (SD 1.5) personal risk factors. Women correctly identified, on average 56.6% [CI 49.8 to 62.2] of their personal risk factors as putting them at risk for stroke. Mean perception of risk was 5.8 (SD 2.1, 10-point scale). 70.4% of women worry about stroke rarely or never, while 29.6% worry about stroke sometimes or frequently. Number of risk factors, perception of health, worry about stroke and education significantly predicted perception of risk ($F_{5,100}=14.177$, $R^2=.415$, $p<.001$). 11% of women reported being unable to attend a medical appointment because of cost, and 20% of women reported being unable to take a medication because of cost. In multivariate analysis, the amount of medical visit co-pays ($B=.391$, $p<.001$) predicted the length of time since visiting a primary care physician ($F_{5,91}=10.944$, $R^2 = .376$, $p<.001$).

Conclusion: This survey analysis, although not yet complete, identifies specific areas of lack of knowledge and risk perception. In this patient population with at least some access to specialty care, common problems such as smoking, failure to take aspirin without contraindication, poorly controlled hypertension and cholesterol were encountered. More can be done to appeal to women's knowledge and risk perception to advocate a change in behavior. Introducing personal risk worksheets into every office visit could make small steps towards this goal of increasing risk perception and behavior modification. A simple form could be present for women to fill out in the waiting room for medical appointments, which appeals to particular health conditions to identify personal risk factors for stroke or coronary artery disease, and reinforces recommendations to minimize risk. It is also important for physicians to address the financial limitations of patients and work with them to minimize out-of-pocket costs. Primary prevention is the final step in our model, and is a complex goal, which incorporates identification of risk factors, perception of risk to advocate behavior modification, access to medical care.