

Male involvement in cardiovascular preventive healthcare in two rural Costa Rican communities

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Abstract

Background. Gender differences in health system usage can lead to differences in the incidence of morbidity and mortality. We conducted a pilot screening targeted towards men to evaluate gender differences in cardiovascular disease risk factor detection and time since last clinic visit.

Methods. Three evening sessions in two communities screened 148 people, mean age 47.7 years. Height, weight, body mass index, blood pressure, blood glucose, and total cholesterol were measured. A questionnaire on past medical history was administered. Participants with elevated measurements were referred to appropriate care.

Results. Men accounted for 60.1% of those screened; 65.5% of the group was overweight, and 22.3% was obese with 42.6% hypertension, 39.2% hypercholesterolemia, and 2.7% high blood glucose. Among men aged 35 to 65, 65.2% were overweight, 20.3% obese, 46.4% hypertensive, 42.0% hypercholesterolemic, and 1.5% with high blood glucose. Within the last 2 years, 53.3% of men and 9.1% of women aged 35 to 65 had not visited a doctor ($P = 0.004$).

Conclusions. A significant portion of those screened had elevated cardiovascular disease risk factors. Given that men visited doctors significantly less frequently, efforts to involve men in prevention of cardiovascular disease within these communities are warranted.

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Keywords: Cardiovascular; Screening; Gender; Participation; Men; Costa Rica; Rural

Introduction

It is projected that by 2020, ischemic heart disease and cerebrovascular disease will account for 10.3% of the global burden of disease with a rapidly increasing portion contributed by developing countries [1]. Consequently, cardiovascular disease is a cause of growing concern in many developing countries, including Costa Rica [2]. A 30% increase in coronary heart disease has been reported in Costa Rica from the 1970s to the 1980s and has become a leading cause of death among adults [3].

Obesity, high blood pressure, high blood glucose, and high cholesterol are all risk factors for cardiovascular disease [4–6]. These treatable conditions, if left undetected, can ultimately lead to serious health problems, loss of work, decreased quality of life, and higher healthcare costs [7,8].

In Costa Rica, an increasing amount of research has focused on trends of risk factors as well as dietary and lifestyle patterns such as high cholesterol intake, smoking, and low levels of physical activity among adolescents and young adults [9–11]. Such research has indicated the importance of primary prevention such as community-based health education, promotion of exercise, smoking cessation, and dietary modification including providing healthier food at schools.

While interventions targeted towards adolescents are vitally important to stem a rising cardiovascular disease

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epidemic, more immediate benefits may be found through interventions aimed at people in older age groups. Using qualified health professions in primary care clinics to provide education, screening, and treatment takes advantage of prior investments in healthcare infrastructure.

Since cardiovascular disease affects both men and women, efforts to ameliorate risk factors are useful for all people [2]. Yet primary care health clinics in Costa Rica are utilized much more frequently by women than by men [12]. In Grecia, Costa Rica, the site of this study, male primary health visits accounted for only 34.7% of all visits by people between the ages of 35 and 65 [13]. In a randomized controlled trial of lifestyle modifications open to all type 2 diabetic patients in Grecia, Costa Rica, only 21.3% of study participants were male [14]. A review of national household surveys from 12 Latin American and Caribbean countries reported consistent differences in health service utilization in which a higher proportion of women used services than men [15].

Two hypotheses were proposed to explain this difference in participation between men and women. First, healthcare professionals in Grecia felt that male cultural norms, such as a sense of invincibility and of clinics as places for females, operated to reduce male participation. Second, patterns of work in which women's labor disproportionately centers on tasks around the home and men work outside the home during the day make attendance at clinics—open only during work hours—difficult.

In previous studies of cardiovascular risk factors in Costa Rica, urban men were found to have elevated cholesterol (26%), blood pressure (16%), and/or obesity (21%) [16]. Smaller percentages of rural men were found to have elevated risk factors for cardiovascular disease. The spread of urban dietary and lifestyle patterns to rural areas, with resulting increases in cardiovascular risk factors among rural populations, is seen in many parts of the developing world [17].

Given Grecia's status as a largely agricultural area with reasonable access to Costa Rica's capital, San Jose, and evidence that men have low levels of participation in preventive healthcare use, we designed a public health intervention and descriptive study to evaluate the level of cardiovascular risk within two small communities in the Grecia area and to examine the feasibility of involving men in preventive healthcare in more accessible ways.

Methods

This community-based public health screening and descriptive pilot study was conducted with community members from two small towns near Grecia, Costa Rica—San Vicente and Santa Gertrudis. Grecia is an agricultural region approximately 50 km from San Jose, Costa Rica's capital. Agriculture accounts for more than 40% of employment in the area. Primary healthcare is provided in small

health clinics, staffed by a doctor, nurse, pharmacist, and primary health technician, in many of the small towns surrounding Grecia. Santa Gertrudis has such a health clinic, but San Vicente does not. As a result, the vast majority of the residents of San Vicente receive their primary care at the clinic in Grecia center associated with San Francisco de Asis Hospital.

Planning and recruitment

The intervention targeted men aged 35 and over and focused on measuring cardiovascular risk factors. After planning meetings with local community volunteers and representatives of the San Francisco de Asis Hospital, the screening times and locations were set for Wednesdays and Thursdays from 6:00 to 8:00 PM so as to accommodate typical male work schedules. In San Vicente, a local community room was used because the community does not have a health clinic. In Santa Gertrudis, the health clinic was reopened specifically for the screening. In Santa Gertrudis, the community volunteer was a woman who also volunteered with type 2 diabetics in the area. In San Vicente, the community volunteer was a man who taught in a low-income school and also volunteered for a recovering alcoholics' home. These community volunteers and others they recruited placed announcements about the upcoming screenings in churches, community centers, and on Radio 16 (a local radio station). Additionally, posters were placed on buses and in local stores. Although the recruitment was targeted towards men aged 35–65 years, anyone above 18 who attended received screening if they wished. Arrangements were also made to ensure that anyone who had elevated risk factors was referred to the appropriate clinic for follow-up. In addition, a list of the screened participants with abnormal values was provided to the clinic staff to facilitate appointment scheduling.

Definition of abnormal values

A body mass index of 25 or above was defined as overweight, and of 30 or above was defined as obese. High blood pressure was defined as ≥ 135 mm Hg systolic and/or ≥ 90 mm Hg diastolic for those without a history of hypertension. For those who were known to have hypertension and were taking medications, the cutoffs for poorly controlled hypertension were ≥ 160 mm Hg systolic and/or ≥ 100 mm Hg diastolic. High blood glucose was defined as a random plasma glucose measurement of ≥ 200 mg/dl. For those who were known to have diabetes mellitus and were taking medications, the cutoff for poorly controlled blood glucose was ≥ 300 mg/dl. Hypercholesterolemia was defined as a total cholesterol measurement of ≥ 200 mg/dl. For those who were known to have hypercholesterolemia and were taking medications, the cutoff for poorly controlled hypercholesterolemia was ≥ 240 mg/dl [18].

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