

# African-American Women's Perceptions of Their Most Serious Health Problems

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African Americans experience a disproportionate burden of illness. According to the Centers for Disease Control and Prevention (CDC), heart disease, cancer, cerebrovascular disease and diabetes are the most common causes of mortality among African Americans.

Data were gathered from 1,055 African-American women to gain their perspectives of the most serious health problems affecting African-American women and their related knowledge, attitudes and health promoting behaviors.

Women listed CDC's top four causes of mortality as their top four most serious health threats. Cancer was reported as a serious health threat by 81% of the participants, whereas heart disease, the most common cause of mortality and a disease amenable to prevention and early intervention, was mentioned by only 31% of the women. Diabetes was reported by 59% of the women and cerebrovascular disease by 52%.

As the Health Belief and other theoretical models would predict, awareness of the seriousness of these four disease groups among African-American women was associated with a greater likelihood of adherence for several of the recommended behaviors. Many opportunities exist for raising women's awareness of these four diseases and linking women's growing health awareness with those health promoting behaviors known to reduce morbidity and mortality.

**Key words:** African Americans ■ cancer ■ cardiovascular ■ diabetes ■ early detection ■ heart disease ■ prevention

© 2005. From Rebecca and John Moores UCSD, Cancer Center and UCSD School of Medicine, La Jolla, CA (Sadler, associate director and clinical professor of surgery; Gilpin, director of the Biostatistics Core). Send correspondence and reprint requests for *J Natl Med Assoc.* 2005;97:31-40 to: Georgia Robins Sadler, PhD, Clinical Professor of Surgery, Moores UCSD Cancer Center, UCSD School of Medicine, 9500 Gilman Drive 0658, La Jolla, CA 92093-0658; phone: (858) 534-7611; fax: (858) 534-7628; e-mail: gsadler@ucsd.edu

## INTRODUCTION

According to the Centers for Disease Control and Prevention (CDC), chronic diseases, such as heart disease, cancer, stroke and diabetes, are among the leading causes of disability and death. Diabetes, for example, is not only a significant cause of death, but it is also a major risk factor for cerebrovascular and cardiovascular disease as well as the leading cause of end-stage renal disease and blindness.

National health-affiliated organizations have identified behavioral goals and objectives to reduce the burden of these illnesses. The National Institutes of Health's Year 2010 Report and the American Cancer Society's 2015 Report set lofty goals for reducing the nation's premature morbidity and mortality.<sup>1-3</sup> The American Cancer Society, for example, is working toward a 25% decrease in cancer incidence and a 50% decrease in cancer mortality by the year 2015.<sup>1</sup>

While scientists continue to search for better ways to ameliorate and eradicate these diseases, sufficient clinical knowledge already exists to permit the identification of a variety of behavioral modification strategies that could accomplish most of the intermediate goals that have been set. Through public health education campaigns and easy-to-access health promotion programs, widespread adoption of health promoting behavioral choices is being accomplished throughout California. With the ongoing statewide antitobacco education program, for example, California's smoking incidence rates are among the lowest in the nation, but this progress has not been accomplished evenly throughout the population.<sup>4</sup> There is an extensive literature that documents the many health disparities that exist among population subgroups. Through more focused efforts to narrow cast health education efforts, it should be possible to reduce known health disparities among high-risk population subgroups.

Health statistics show that the African-American community suffers a disproportionate burden of premature, life-threatening illnesses<sup>5</sup> and that the community could benefit from the widespread adoption of

known health promoting behaviors. For African-American women over the age of 45, heart disease, cancer, stroke and diabetes are the leading causes of death. Looking as just one of these specific diseases, deaths from diabetes are two times higher in the African-American population than they are in the white population, and diabetes-associated renal failure is 2.5 times higher in the African-American population than it is in the Hispanic population.<sup>6-8</sup> While widely broadcast health promotion messages reach the largest number of people, “narrow cast” messages that encourage population-specific adoption of health promoting behaviors have been proven to reduce morbidity and mortality within these most at risk communities.<sup>9-16</sup>

A variety of theoretical models have been used to frame community-specific health promotion intervention programs. Each model attempts to predict the subjects' ultimate likelihood of adherence with recommended health behaviors by measuring and manipulating changes in mediational variables. A common element among many of these theoretical models is the individual's baseline level of awareness of a particular health threat. The Health Belief Model, for example, includes determination of whether individuals are aware of the existence of a serious health threat and perceive a personal vulnerability to it.<sup>17</sup> In the Health Promotion Model, cognition is presumed to affect actions, and environmental events are proposed as operating interactively in determining behavior.<sup>18</sup> For the Stages of Change Model, the first three stages are linked to the subjects' awareness and extent of a health problem.<sup>19</sup> Other theoretical models, such as the Social Cognitive Theory,<sup>20</sup> Self-Efficacy

Theory<sup>21</sup> and Social Learning Theory,<sup>22</sup> similarly incorporate the element of health threat awareness. The theoretical framework of these models can be used to help guide the creation of better-focused health promotion programs.

Given that a common element of these various theoretical models is the individual's or group's perception of the seriousness of a particular health threat and its potential for personal impact, this study gathered data related to African-American women's perceptions of their most serious health threats. Such information can then be used to determine where the focus of the various health promoting interventions should be initiated, knowledge that is critical to the success of the interventions and to the most efficient use of limited resources. For example, very different programs would be created for women who already demonstrate an acute awareness that they are personally highly vulnerable to a particular type of cancer compared to a group of women whose vocabulary does not even include the word “cancer” and who have little awareness or understanding of the disease.

## METHODS

### Instrument Development

While it would have been ideal to use an instrument that had previously been validated for this data collection, no instrument was identified that addressed the specific questions that were the focus of this inquiry. Hence, an instrument was developed and pilot tested, first with focus interviews and focus groups and then with a sample of 208 women before

**Table 1. Women's Perceptions of the Four Most Serious Health Problems Facing Black Women (N=3,305)\***

Most Serious Health Problems by Frequency	Frequency	CDC's Leading Causes of Death in African-American Women		
		Rank	Number	Rate per 100,000 population
Cancer	986	2	26,246	157.6
Diabetes	625	4	5,382	32.3
Cerebrovascular disease	578	3	9,623	57.8
Heart disease	315	1	38,560	231.6
HIV infection	169	8	2,453	14.7
Obesity	163	**		
Stress	75	**		
Sickle cell	48	**		
Malnutrition	15	**		
Fibroids	13	**		
Drugs	10	**		
Lupus	10	**		
Alzheimer's	3	**		
Eating Disorders	1	**		

\*Not all of the 1,055 women gave the four answers for which space had been provided; \*\* These health problems were not ranked in CDC's leading cause of death.

being used in the current study.<sup>23,24</sup> The survey included questions regarding participants' perceptions of the most serious health threats for African-American women, their perceptions of their capacity to influence their health, their sources of information and their use of screening examinations for the early detection of the most common causes of premature mortality among African-American women. Data related to demographics as well as adherence to recommended screening guidelines were also collected.

## Subject Recruitment

African-American clergy and female lay church leaders personally spoke with cosmetologists they believed would be receptive to participating in the Black Cosmetologists Promoting Health Program.<sup>23,24</sup> The principal investigator then met with each of the 24 interested stylists, and 20 of them enrolled their salons in the study. Once a lead stylist entered her salon in the study, all other stylists in the salon were invited to join the research project. Of the four stylists who did not join the study, one stylist's salon remodeling project meant she could not accommodate the project for several months, one had recently become seriously ill and one was not interested. The fourth was dropped from further consideration because she repeatedly forgot to attend the protocol training sessions she had set up for herself in her own salon. The participating cosmetologists' clients were recruited via undergraduate African-American research assistants (RA). When the RAs were not present, the cosmetologists encouraged their clients to join the study and directed them to a display of self-administered consent documents and surveys. As an incentive to participate, women who completed the consent document and survey were entered in a drawing for a large basket of beauty supplies that was displayed next to the self-administered subject recruitment materials.

The RAs worked in each salon on a variety of days and times to recruit a representative sample.

They sequentially invited every client to join the program. The RAs assured methodological consistency among the salons and gave a reliable estimate of the clients' refusal rate. When a woman said she was not interested in participating in the in-depth data collection, the RA asked her if she would be willing to complete an IRB-approved four-question survey anonymously to allow comparisons to be made between participants and nonparticipants.

Of the 530 women who were asked to participate in the study by an RA, 13.3% (71/530) refused. Chi-squared analysis showed no difference in age or education level between the women who refused to participate versus those who participated, nor between those women who were recruited by an RA versus the self-administered display.

## Statistics

Chi-squared tests were conducted to assess associations between the participants' age group and educational background with their listing of serious health problems and reports of recent screening examinations. A p value of <0.05 was considered statistically significant.

## Sample Description

The sample included 1,055 African-American women living in San Diego County between the ages of 20 and 94, with a mean age of 40.5 years (SD=15.6). This weighting of younger participants in the sample is consistent with the age distribution of the region's African-American population. While 6% of the county's population is African-American, only 3.1% of those 55 and older and 2.5% of those 65 and older are African-American.<sup>25</sup> When women did not give their age (N=42), the RA and the stylists, who generally knew their clients over years and even decades, each independently estimated whether the women were at least 40 years of age. All who withheld their age were estimated to be well over 40 years of age. While this group appeared to be over 40 and,

**Table 2. Most Serious Health Problems by Order of Placement\***

Top Four Health Problems	Health Problems' Order of Placement on Survey				
	1 N (%)	2 N (%)	3 N (%)	4 N (%)	Total
Cancer	456 (46)	249 (25)	181 (18)	99 (10)	985
Diabetes	102 (16)	216 (35)	207 (33)	100 (16)	625
Cerebrovascular diseases	218 (38)	188 (33)	107 (19)	65 (11)	578
Heart disease	58 (18)	96 (31)	101 (32)	60 (19)	315
Total	834 (33)	749 (30)	596 (24)	324 (13)	2,503

\* Not all women gave the four answers for which space had been provided

hence, a prime focus for many of the health promotion strategies designed to address disproportionate morbidity and mortality rates, they were always analyzed independently when age was a variable, including the calculation of the sample's mean age.

As anticipated, the women who could afford to purchase beauty services at a neighborhood salon and would consent to research participation were also more likely to be better educated than the region's African-American population at large. This is a concern that plagues most research studies and must be taken into account when the generalizability of the findings is considered.<sup>26</sup>

Overall, 75% (790) of the women reported that they worked outside their home. Of the 945 women in the study who were 65 years old and younger, 80% (756) reported working outside the home.

## RESULTS

### Top Health Problems

One of the survey questions asked participants to list the top four most serious health threats for African-American women. Half (50.4%) of the participants listed four health threats, 26.4% listed three, 13.5% listed two, 4.9% listed one and 4.7% provided no response.

Table 1 shows the four health problems most frequently mentioned by the participants and the number of participants listing each. This data is juxtaposed with the CDC's list of the most common causes of morbidity in African-American women. Of the 1,055 women, 80.9% (853) listed one or more cancers among their top four health threats, while 59.1% (624) listed diabetes, 52.2% (551) listed cerebrovascular diseases and 31.4% (331) listed heart disease. Women 50 years of age and older were more likely to list heart problems than those under 50 ( $\chi^2=15.3$ ,  $p<0.05$ ). The women's listing of the other top three health problems was unrelated to the participants' ages. While women with higher education were more likely to list cerebrovascular disease than women with less education ( $\chi^2=19.8$ ,  $p<0.05$ ), listing of the other three top health problems

was unrelated to educational groups.

Women were compared according to the number of health threats they listed. Women who listed four health threats (533) were contrasted with those who listed less than four (422), with women who listed four health problems being significantly better educated ( $p<0.001$ ). They were also more likely to describe themselves as being well-informed about the indicator diseases, breast cancer ( $p<0.001$ ) and diabetes ( $p<0.03$ ) than those who listed less than four health threats. In contrast, age was not significantly associated with the number of health threats listed. Since not all participants listed four problems, it is likely that the order in which they listed the diseases may have been a partial reflection of the women's "top-of-mind awareness" of these diseases. Cancer was listed first by nearly half of the women as the most serious health problem facing black women, while cerebrovascular disease was listed first by over a third of the women (Table 2). Both heart disease and diabetes were each listed first by less than a fifth of the women.

### Health Examinations

To compare their awareness of disease with their health screening activities, women were asked the dates of their most recent physical exam, eye exam, sugar/diabetes test screening exam, breast self-exam, clinical breast exam and mammogram. Table 3 displays women's reported frequency of health screening for those examinations that are recommended to begin at age 20. Annual physical examinations in the past year were reported by 57% (602) of the women, an eye exam in the past year was reported by 47% (495), and 31% (328) reported having done a breast self exam in the past month.

Table 4 presents the screening data that are relevant only to those 567 women who were 40 years of age and older. There were no significant differences in adherence by age among any of these screening recommendations. Screening practices by educational level were only significant for clinical breast exams ( $p<0.05$ ). Separate papers explore the

**Table 3. Frequency of Health Examination by Age and Education of Entire Sample (N=1,055)**

	Total N	Annual Physical Exam N (%)	Annual Eye Exam N (%)	Monthly Breast Self-Exam N (%)
≤ High school graduate	122	60 (49)	53 (43)	30 (25)
Some college/Vocational	547	314 (58)	245 (45)	169 (31)
≥ College graduate	356	217 (61)	185 (52)	123 (35)
Missing	30	11 (37)	12 (40)	6 (20)
<50 years	752	436 (58)	345 (46)	236 (31)
≥50 years	261	152 (58)	136 (52)	85 (33)
Age not given but over 40	42	14 (33)	14 (33)	7 (17)

women's diabetes screening and breast cancer screening in greater depth.<sup>27</sup>

The data in Table 5 demonstrate the women's screening practices juxtaposed by their listing of the four leading causes of mortality among African-American women. Women who listed cancer as a serious health threat were more likely to be in compliance with their annual clinical breast exam ( $p<0.05$ ) and their monthly breast self exam ( $p<0.05$ ). Those who listed diabetes as a serious health threat were more likely to have had a glycemia screening in the previous year than those who did not ( $p<0.05$ ). Women who listed cerebrovascular disease were significantly more likely to have done a breast self-exam in the past month and had a glycemia screening, clinical breast exam, and mammogram in the past year than those who did not list cerebrovascular disease ( $p<0.05$ ). The greater awareness of cerebrovascular disease as a health threat—which was also related to higher education levels—may indicate a group of women who are more health-conscious overall and better insured or able to afford to purchase health services.

Considered by age, a similar correlation was observed. When women 40 years of age and over listed cerebrovascular disease, they were more likely to be in compliance for diabetes screening, BSE, CBE and mammograms than those who did not list cerebrovascular disease. Similarly, those who were 40 years old and older and listed cancer as a serious health threat were more likely to report having had a routine physical in the past year.

### Health Promotion Attitudes

Women responded to 10 closed-ended statements related to their perceptions of their ability to influence their own health outcomes (Table 6). The women's discernment of the subtle phrasing differences in the series of attitudinal statements suggested that they had read and understood each question. The women's responses strongly suggested that they know there are things they can do to influence their health. Furthermore, for the most part, they dis-

agreed with statements that suggested disinterest in their health, a fatalistic attitude toward their health and lack of control over their health. They did not believe that more information causes confusion, worry or disinterest, and they disagreed with the statement that early detection makes no difference in disease outcome. However, regarding the statement related to other people's motivation to follow healthy lifestyles, their responses were far less homogenous.

Using an open-ended question, women were asked to list up to three specific sources of information for breast cancer and three for diabetes. Physicians were the source of information most frequently listed in the first reply line, 37.3% for breast cancer and 24.4% for diabetes, suggesting that physicians' educational efforts had top-of-mind prominence for the women. When all three reply lines were analyzed, media was the most frequently listed source of health information. For breast cancer, 73.9% (779) of the women listed media (print and electronic media) as a key source of information compared to 49.6% (524) for physicians. Print media was more frequently listed [54.7% (577)] than electronic media [19.3% (203)]. For diabetes, 46.9% (494) of the women listed media as a key source of information compared to 34.5% (364) for physicians. Print media [36.3% (383)] was more frequently listed than electronic media [10.6% (112)]. Twelve women (1.2%) reported nurses as a source of health information for breast cancer, and eight women (0.8%) reported nurses as a source for diabetes health information. The Internet, frequently looked to as being a great equalizer for access to knowledge, was listed as a source of information by only 2% of the women, 25 for breast cancer and 20 for diabetes. Among the other top sources of information for breast cancer were: friends (89), work/school (57), talking to others (48) and talking to someone with breast cancer (36). For diabetes, the other top sources of information included: friends (132), talking to someone with diabetes (54) and talking to others (34).

### DISCUSSION

The women who participated in this study spon-

**Table 4. Frequency of Health Screening Action by Age and Education of Women 40 Years and Older (N=567)**

	Total N	Glycemia Screening in Past 12 Months N (%)	Clinical Breast Exam in Past 12 Months N (%)	Mammogram in Past 12 Months N (%)
< High school graduate	82	21 (26)	35 (43)	30 (37)
Some college/vocational	249	94 (38)	143 (57)	112 (45)
≥ College graduate	217	84 (39)	129 (59)	93 (43)
Missing	19	2 (11)	2 (11)	3 (16)
40–49 years	264	88 (33)	158 (60)	99 (38)
50 years and older	261	101 (39)	139 (53)	126 (48)
Age not given but over 40	42	12 (29)	12 (29)	13 (31)

taneously listed among their top four most serious health threats for African-American women the same four most common causes of death as reported by the Centers for Disease Control (heart disease, cancer, cerebrovascular disease and diabetes). However, the considerable variations in their levels of awareness of each disease and compliance with recommended screening guidelines underscore the need for continued public health promotion efforts that are focused on African-American women and the families they nurture. Most striking, heart disease, the number one cause of death among African-American women, was listed by only 31% of the women as one of the four most serious health threats for African-American women. In contrast, cancer, the second leading cause of death, was listed by 81% of the women, demonstrating that it is possible to achieve widespread awareness of a disease if sufficient, focused effort can be devoted to the health threat. Women's reported reliance on media as a key source of their health information demonstrates that media professionals are key partners in the nation's efforts to increase health awareness and health promoting behaviors. Equally important to consider is that women clearly have the opportunity for more frequent, extended and repetitive exposure to the media-disseminated health information than to the physician-disseminated information. Their low reliance upon the Internet for information is an important reminder that Internet-accessible information will not currently benefit all women equally.

The low report of heart disease as a serious health threat to African-American women is consistent with earlier studies.<sup>28-30</sup> The high frequency with which cancer was reported (81%) as serious health problems affecting African-American women is encouraging. This relatively high level of awareness contradicts the low levels of awareness reported in previous studies.

This finding may be a reflection of the progress that has been achieved by California's campaign to inform women that a free breast cancer screening and treatment program is available for low-income women, combined with the American Cancer Society, the Susan G. Komen Breast Cancer Foundation and the National Cancer Institute's ongoing breast cancer education campaigns.<sup>31-34</sup> Media attention to breast cancer has been relentless in stark contrast to the very limited attention the media has given to the other three leading health threats among women.

When these factors are combined with the participants' relatively high level of education, the increasing attention being given to cancer by affinity organizations and the electronic and print media, and women's reported reliance on print and electronic media for their health information, there are grounds for optimism regarding the ability to change women's health knowledge and attitudes. Given women's reported reliance on media sources for their health information in this and other studies,<sup>35-42</sup> the media's attention to these two topics may have created more opportunities for participants to acquire greater knowledge about cancer than the other three leading causes of death.

Unfortunately, the screening data reported by this study's participants suggest that women's awareness of these diseases had not yet been widely translated into the screening actions necessary to help reduce black women's disproportionate mortality rates. The various theoretical health promotion models suggest that while pre-existing health knowledge is an important component of behavioral change, it is, by itself, insufficient to achieve widespread change. This and other studies have shown that awareness of a disease does not necessarily predict adherence to appropriate health promoting behaviors.<sup>43-48</sup> This study's results further demonstrate that even the additional facilitation

**Table 5. Screening by Awareness of the Four Leading Causes of Mortality**

Disease Listed	Total N	Physical Exam N (%)	Glycemia Screening N (%)	Eye Exam N (%)	Breast Self-Exam N (%)	Clinical Breast Exam N (%)	Mammogram N (%)
Cancer listed	853	499 (58.5)	258 (30.2)	411 (48.2)	278 (32.6)*	499 (58.5)*	223 (26.1)
Cancer not listed	202	104 (51.5)	64 (31.7)	85 (42.1)	51 (25.2)	94 (46.5)	53 (26.2)
Cerebrovascular listed	551	328 (59.5)	186 (33.8)*	280 (50.8)	202 (36.7)*	344 (62.4)*	172 (31.2)*
Cerebrovascular not listed	504	275 (54.6)	136 (27)	216 (42.9)	127 (25.2)	249 (49.4)	104 (20.6)
Diabetes listed	624	363 (58.2)	209 (33.5)*	301 (48.2)	209 (33.5)	353 (56.6)	164 (26.3)
Diabetes not listed	431	240 (55.7)	113 (26.2)	195 (45.2)	120 (27.8)	240 (55.7)	112 (26)
Heart disease listed	331	187 (56.5)	106 (32)	167 (50.5)	113 (34.1)	184 (55.6)	89 (26.9)
Heart disease not listed	724	416 (57.5)	216 (29.8)	329 (45.4)	216 (29.8)	409 (56.5)	187 (25.8)

\*Sig  $\chi^2$   $p < 0.05$

tors of knowing the value of early detection and intervention and the existence of minimal levels of fatalism plus a high awareness that individuals can influence their health outcomes are still not sufficient to create high levels of adherence to recommended screening behaviors. Other ways of promoting adherence to screening guidelines are clearly necessary.

The participants' heightened health awareness combined with their high reliance on healthcare providers as a source of health information underscores the important role healthcare providers can play—and need to play—in promoting healthy lifestyles among their African-American patients. For patients who already have a relationship with a healthcare facility, a specific recommendation from their provider to undergo a screening recommendation and the active facilitation of the scheduling of the screening procedure remains the best predictor of guideline adherence.<sup>49</sup> This facilitation can include: 1) the scheduling of an annual screening examination at the time of the current appointment, 2) a printout of the dates and times of scheduled appointments, 3) a mail/telephone reminder of a scheduled appointment and to confirm that the existing appointment is still viable, and 4) follow-up with patients who fail to

attend a scheduled screening appointment (as is currently required by mammography providers).

Of note, while the women frequently listed their physician as an important source of health information, nurses were rarely listed. This may be because nurses did not provide such support to their patients or because participants considered nurses' efforts to have been a directive of their physicians. Either way, given that a key function of the nursing role is to offer patients health promotion and health-maintenance counseling, it appears that an optimal level of public awareness of nurses' role in this regard has not been achieved independent of the physician.

For patients who do not have the benefit of an ongoing relationship with a healthcare provider who can recommend regular screening appointments, there is an urgency for health educators to find alternate ways to motivate women toward action. For this latter group, lay health advisors at churches and social affiliations have been shown to be effective motivators of screening compliance, particularly when they include repetitive cuing toward adherence to recommended health actions.<sup>50,51</sup>

Social marketing experts have underscored the need for frequent and repetitive cuing from multiple

**Table 6. Responses to Health Promoting Statements (N=1,055)**

Survey Statements	Agree N (%)	Disagree N (%)	Don't Know N (%)
When it comes to illness, there's not much you can do about it.	41 (3.9)	992 (94)	16 (1.5)
Early detection for diabetes doesn't make much difference.	67 (6.4)	941 (89.2)	42 (4)
The more health information I hear, the more confused I get.	126 (11.9)	885 (83.9)	29 (2.7)
I worry that just thinking about a disease might give it to me.	32 (3)	999 (94.7)	16 (1.5)
Breast cancer early detection doesn't make much difference.	24 (2.3)	989 (93.7)	30 (2.8)
The more I know about a disease, the more control I have.	958 (90.8)	53 (5)	34 (3.2)
Most people aren't interested in following healthy lifestyles.	383 (36.3)	523 (49.6)	139 (13.2)
There are things I can do to prevent or control diabetes.	936 (88.7)	39 (3.7)	73 (6.9)
I try to follow suggestions intended to improve my health.	985 (93.4)	49 (4.6)	11 (1)
I'm tired of hearing about what I should do for my health.	63 (6)	972 (92.1)	15 (1.4)

and diverse sources to reinforce health promoting messages. Even a brief message from a healthcare provider can be beneficial, and this will be of even greater value if it can be amplified through supplemental avenues of information dissemination.

While greater efforts are needed to promote adherence to cancer and diabetes screening, health educators and providers who are concerned with reducing the incidence and mortality rates related to heart disease and cerebrovascular disease need to expend greater effort on raising awareness of these life-threatening diseases among African-American women as well as cuing them to action. Comparable attention by healthcare providers, public health educators and the media to raise awareness of these diseases is essential to advance the health and well-being of African Americans.

Generalizations from this study must be drawn with caution. Review of the literature shows that the adoption of health promoting behaviors is positively correlated with a high internal locus of control and a low degree of fatalism. Previous studies have reported that African-American women are more likely to score high on external locus of control measures and fatalism.<sup>52,53</sup> In contrast, the African-American women's responses in this study regarding their perception of their ability to influence their health (Table 6) were suggestive of a high internal locus of control and a minimal amount of fatalism. Further study is warranted to determine if this is a result of the fact that African-American women living in San Diego County hold attitudes reflective of a community that perceives that it has more control. Given that 57% of San Diego's African Americans reported in the 2000 Census that they were born outside of California,<sup>25</sup> it is feasible that the members of San Diego's African-American community may in fact hold different attitudes than women from communities whose members have lived in the same community for generations. Further, the sample contained an overrepresentation of participants with more years of formal education than the general population and the possession of sufficient discretionary funds to be able to purchase beauty services at a salon in their neighborhood. However, if these women who report a greater internal locus of control and are from more advantaged socioeconomic groups are underutilizing life-extending screening services, this raises even greater health concerns for African-American women who face greater socioeconomic challenges.

## CONCLUSION

This study suggests clear needs and opportunities for health promoting interventions in the doctor's office as well as in other community settings and

through the increased coverage of health issues in the media. While women in this study possessed an awareness of the most common health threats, this awareness varied greatly among the four leading health threats. Healthcare providers need to make specific screening recommendations to their patients and then follow through with their patients to reinforce the importance of adhering to the recommendations. Since these women obtain much of their health-related information from print and electronic media, public health advocates can amplify their messages by enlisting journalists' help in the effort to inform and remind African-American women of the actions they need to take to safeguard their health.

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