Cancer Knowledge, Attitudes and Beliefs among African Americans

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Four hundred two residents of a disadvantaged African American community in New Orleans were surveyed to determine their knowledge, attitudes, and beliefs regarding cancer and cancer screening. The residents were interviewed in their homes by trained community members. Two hundred ninety members of the Ochsner Health Plan (OHP) were also surveyed and the results from both groups were compared. Both groups were health conscious and expressed a willingness to participate in cancer screening. Mean cancer knowledge scores were lower in the target population (4.95) when compared with the OHP group (5.84). Thirty-two percent of the target population could identify the 7 cancer warning signs versus 47% of the OHP group. Similar percentages of women in both groups could identify risk factors for breast cancer, but a number of etiologic myths were prevalent in the African American community. Participants in the African American community had a more fatalistic view of cancer and were less trusting of the medical community. Cancer screening rates were similar for cervical and colorectal cancer, but a significantly higher percentage of women in the OHP group received regular mammograms, 83% versus 43% in the target population. Thirty-two percent of the target population and 75% of the OHP group stated they had received a digital rectal examination. Only 34% of the African American males had received a Prostate Specific Antigen test versus 46% in the OHP group. The results of the survey identify a number of barriers to cancer screening among the African American community and support the need for a culturally sensitive, community-based cancer education program.

INTRODUCTION

In 1998, the American Cancer Society estimated there would be 1,228,600 new cases of invasive cancer diagnosed and 564,800 cancer deaths in the United States (1). These figures actually represent a reduction in incidence and an improvement in death rates from the previous year. African Americans, though, still experience some of the highest cancer incidence and mortality rates of all populations in the United States (2,3). Before the age of 60, African Americans have a higher probability of developing any of the 4 major cancers (lung, breast, prostate, and colorectal) than all other races combined (3). Moreover, in 1992, the age-adjusted cancer mortality rate for African Americans was 32% higher than those for other ethnic groups in the United States (3). Although there have been improvements, the 5-year relative cancer survival rate for African Americans is only 44% compared with 60% for white Americans (1).

These national trends are mirrored locally in South Louisiana where African American males have the highest age-adjusted cancer incidence rates in the state of Louisiana (4). The mortality rates for cancers of the lung, colon, and prostate are significantly higher for African American males compared with white males (4,5). For African American females living in the New Orleans area, the cancer incidence rates are similar to those of other racial groups, but the mortality rates are significantly higher for cervical, breast, and colorectal cancers (4-6).

Many reports have examined the factors contributing to the increase in cancer incidence and mortality observed among the African American population (1,7-9). Many of these factors were directly related to the prevailing socioeconomic status of the community (1,7-9). In fact, the American Cancer Society's "Special Report on Cancer in the Economically Disadvantaged" concluded that in America, economic status is the most important factor relating to cancer incidence and survival (10). In the United States, a disproportionate number of African Americans are economically disadvantaged (8). This fact has a substantial impact on the increased cancer incidence and mortality observed in the African American community.

In addition to the economic barriers that exist, a number of cultural, historical and social issues among the African

American population have been identified that may also hamper effective early detection and cancer treatment (11-16). Programs designed to promote involvement of African Americans in cancer prevention and detection programs must seek to overcome these socioeconomic barriers. A common deficiency identified in many studies has been the lack of culturally sensitive, community-based, cancer education programs. These programs, which promote effective prevention strategies and active participation in cancer screening programs, may offer the best chance of reducing cancer incidence and mortality among the African American population (10-12,14-18).

In 1994, the Ochsner Cancer Institute began a program to enhance cancer control among an economically disadvantaged African American population in the New Orleans area. The goal of this project was to promote cancer awareness, cancer prevention, and active participation in cancer screening programs. Initially, a survey of the community's knowledge, beliefs, and perceptions of cancer was conducted to gain insight into the concerns of the target community. The survey also explored the current screening practices of this community and their willingness to obtain screening tests. The results of this survey were used to help identify barriers to cancer screening and were essential in the subsequent development of an effective, culturally sensitive, cancer education and screening program in the community.

METHODS

The target population for this survey and subsequent intervention consisted of a disadvantaged community residing in the city of New Orleans, Louisiana. This community is approximately 98% African American, with 85% of families having incomes below $15,000 a year and 61% having incomes lower than $5000 per year. Although disadvantaged, the community has a very organized infrastructure, with established, well-respected community leaders.

Initially, a pre-notification letter was sent to persons within the community informing them of the upcoming survey. From June to August 1995, a total of 402 community residents were surveyed. The participants were selected randomly and the surveys were conducted through personal interviews at the participants' homes by trained community members who were hired to form a survey team and assist in the data collection. The investigators and community leaders believed that both community participation as well as validity of the answers would be increased by the use of community members as interviewers. Training sessions were conducted for the survey team. These sessions focused on how to administer a questionnaire, confidentiality of responses, and safety. The team also learned which specific screening tests were available and their significance.

The questionnaire sought information concerning the participant's:

- overall general health and health concerns,
- cancer knowledge, cancer risk factors, and the available cancer screening tests,
- attitudes and perceptions toward cancer, cancer screening, and the medical community,
- frequency of and willingness to participate in cancer screening programs.

"General health" questions explored the participants' perceptions of their overall health and their opinions concerning the value of general check-ups. "Knowledge" questions included identifying cancer warning signs, the known causes of cancer, the efficacy of cancer treatment, and what screening tests are available and the frequency at which they are recommended. "Attitude and belief" questions sought to identify some of the misconceptions about cancer, the perceived likelihood of getting cancer, whether cancer was felt to be a significant health problem, and overall trust of the medical community.

The responses of the surveys from the target population were compared with responses obtained from a random sample of participants from the Ochsner Health Plan (OHP), the HMO operated by the Ochsner Clinic. A total of 900 surveys were randomly mailed to members of the OHP. Over the next 2 months, 290 surveys were returned, the results of which are used for comparison with results from the target population. The investigators recognize that different methods of data collection may introduce a bias into the data, but it was felt that the information from the Ochsner Health Plan (OHP) group could serve baseline to help determine what differences may exist across socioeconomic and cultural lines. The results of the two groups were compared using a Pearson Chi-Squared analysis to determine significant differences between responses.

RESULTS

Demographics

The demographics of the 2 groups are listed in Table 1. As expected, significant differences were noted between the 2 groups in regard to race, educational level, and health insurance. The 2 groups were similar with respect to age distribution, with the majority of each group being in the 40 - 59 year age group.

General Health and Health Concerns

A significant difference was noted when participants were asked to describe their general health. Twenty- two percent of the target population described their health as very good to excellent compared with 55% of the OHP group ($p<0.05$).

The majority of those surveyed in the target population described their health as good (44%) or fair (29%). Participants in both groups were health conscious, with 83% of the target population and 91% of the OHP group stating that they had a regular doctor. Moreover, 91% of the target population and 82% of the OHP group stated they had had a complete check-up in the past 5 years. When asked if they receive a check-up regularly (at least once a year), 54% of the target population stated "definitely yes," compared with 34% of the OHP group. Asked if getting a complete check-up was important, 76% of the target population and 64% of the OHP group felt it was "very important" to receive physical check-ups even if feeling OK. When asked to rank which health problems they were most concerned about getting, participants in the target population ranked cancer second behind heart attack but ahead of high blood pressure, stroke, and diabetes. A striking difference was noted when participants were asked how they would find a good doctor or hospital. Seventy percent of the target population stated they would "ask a friend," whereas only 8% of the OHP group would use this method. Conversely, 76% of the OHP group stated they would "ask a doctor" for a recommendation; only 3% of the target population stated they would use this method.

Cancer Knowledge

Eight questions concerned general cancer knowledge. Although the baseline fund of knowledge was good in the target population, significant differences were noted between the 2 groups in the responses to several questions (Table 2). For the target population, the mean number of questions answered correctly was 4.95, with 49% of those surveyed answering at least 6 questions correctly. For the OHP group, the mean number of questions answered correctly was 5.84, with 64% of this group

TABLE 1. Demographics

	Target population n=402	OHP group n=290
Gender:		
male	45%	33%
female	55%	67%
Ethnic Background:		
African American	97%	11%
Caucasian	2%	80%
Hispanic	1%	2%
Native American	1%	5%
Age:		
18 - 39 years	11%	1%
40 - 59 years	70%	95%
60 - 70+ years	19%	4%
Education:		
did not graduate high school	60%	7%
high school graduate	29%	53%
college graduate and beyond	11%	40%
Marital Status:		
single	42%	9%
married	27%	78%
divorced	16%	10%
separated	15%	3%
Health Insurance:		
Medicaid and/or Medicare	63%	2%
private	21%	98%
uninsured	16%	

TABLE 2. General Cancer Knowledge

	target population n=402	OHP group n=290	p Value
There are some cancers that run in families.	% agree 86%	% agree 95%	($p < 0.001$)
If cancer is caught early, there is a good chance it can be cured.	% agree 77%	% agree 92%	
There are some things people can do to prevent cancer.	% agree 65%	% agree 84%	($p < 0.001$)
Cutting down on fatty foods helps prevent cancer.	% agree 55%	% agree 63%	
A person can never be cured of cancer.	% disagree 54%	% disagree 75%	($p<0.05$)

answering at least 6 questions correctly. This difference was significant ($p<0.05$). Participants were asked to identify the 7 cancer warning signs out of a list of 12 symptoms. Thirty-two percent of the target population and 47% of the OHP group were able to identify all 7 warning signs. For the entire list of 12 symptoms, 9% of the target population and 21% of the OHP group were able to correctly identify at least 9 of the 12 symptoms as to whether or not it was a warning sign for cancer. This difference was also significant ($p<0.05$).

With respect to specific cancers, 37 % of the target population and 43% of the OHP group were able to identify risk factors for colorectal cancers. This difference was not significant. A significantly higher percentage of women in the OHP group could identify the correct frequency recommended for screening mammograms in women over 40 years old (89% vs. 62% in the target population). The percentage of women in each group that could identify risk factors for breast cancer was similar and no differences were seen except when asked if family history of breast cancer was a risk factor. Ninety-three percent of the OHP group identified this as a risk factor, while only 67% of women in the target population felt it was a risk factor ($p<0.05$). Significant differences were noted in the percentage of women in the target population that incorrectly identified "a blow to the chest", "drug addiction", and "breast feeding" as risk factors. The most striking difference was "a blow to the chest", where 67% of the target population thought this was a risk factor versus 26% of the OHP group.

TABLE 3. Cancer Beliefs and Attitudes

	target population n=402	OHP group n=290	p Value
Cancer is a death sentence for most people.	% agree 3%	% agree 26%	($p<0.001$)
Exposure to air will cause cancer to spread.	% agree 74%	% agree 37%	($p<0.001$)
A hard bump or knock can cause cancer.	% agree 60%	% agree 21%	($p<0.001$)
I really don't think I will get cancer.	% disagree 46%	% disagree 24%	($p<0.03$)
If I got cancer, I would rather not know it.	% agree 21%	% agree 6%	($p<0.001$)
If I'm going to get cancer, I'm going to get it, so I don't worry about it.	% disagree 56%	% disagree 67%	
I sometimes find it difficult to talk to doctors.	% agree 24%	% agree 12%	($p<0.001$)
I sometimes do not trust what doctors tell me.	% agree 35%	% agree 26%	($p<0.001$)
Getting treated for cancer can be worse than the disease.	% agree 36%	% agree 29%	

Both groups had equal numbers of male participants who identified "high fat diet" as a possible risk factor for prostate cancer, but a significantly higher percentage of men in the target population correctly identified being a "black male" as a risk factor (39% vs. 12% for the OHP group).

Cancer Beliefs and Attitudes

Fourteen questions were asked concerning cancer beliefs and attitudes as well as overall attitude towards the medical community. A number of significant differences were noted in the responses to the questions (Table 3). In general, the participants in the target population tended to harbor more misconceptions, have a more fatalistic view of cancer, and be less trusting of the medical community. Most still felt, though, that cancer was a significant problem in the African American community and were worried about developing cancer. A total of 8 questions were used to evaluate the group's overall attitude towards cancer and cancer treatment. An overall positive attitude was given if participants responded in a positive fashion to at least 6 of the 8 question. In the target population, 43% of the group had an overall positive attitude versus 60% of the OHP group. This difference in overall attitude was significant ($p<0.05$).

Cancer Screening

In general, participants in the target group stated they were willing to participate in cancer screening programs. Eighty-five percent stated they would consent to cancer screening tests if ordered by their doctor, and 62% felt it would be "no problem" for them to get away from family or job to present for such testing. Concerning specific cancers, similar percentages in the target population and the OHP group had had a flexible sigmoidoscopy in the past, 26% and 30%, respectively. Likewise, a similar percentage of those surveyed (66% target population and 78% OHP group) stated they would be willing to undergo a flexible sigmoidoscopy if it was ordered by their doctor. For women surveyed, 80% of the target population and 94% of the OHP group stated they had had a mammogram. More importantly, there was a significant difference in the percentage of women who stated that they received mammograms on a regu-

lar basis (every 1-2 years), 43% for the target population compared with 83% for the OHP group. The percentages of women who had had Pap smears and received them on a regular basis were essentially the same for both groups.

Significant differences were noted between the men of the target population and the OHP group with regard to prostate cancer screening. Only 32% of the men in the target population had ever had a digital rectal examination and received them on a regular basis. For the men in the OHP group, 75% had had a digital rectal examination and 61% received them on a regular basis. Only 34% of the target population had ever had a prostate-specific antigen blood test compared with 46% of the OHP population. Moreover, 30% of the men in the target population stated they had never heard of the prostate gland.

DISCUSSION

Many reports document the relationship of socioeconomic factors to cancer screening, but less is known of the relationship between a person's knowledge, attitudes, and beliefs regarding cancer and the likelihood of their participation in cancer screening programs (12,19,20). This study compared the attitudes, perceptions, and cancer knowledge of African Americans in a lower socioeconomic community with those of a predominately white, middle-to-higher socioeconomic community. Although similarities exist, the results of this survey revealed a number of factors that may negatively impact the participation of African Americans in cancer screening programs.

In this study, the participants of the target population were as concerned about their health and general health maintenance as those in the OHP group. The percentage of participants who felt getting a regular check-up was very important and received check-ups on a regular basis was actually higher in the target population despite not being in an HMO network. The vast majority of the target population also stated they would participate in cancer screening programs if ordered by their physician. These data suggest that the discrepancies in health care between those of lower and higher socioeconomic status are not simply a result of apathy among those in the disadvantaged population. Other investigators have documented the willingness of African Americans to participate in health maintenance programs once socioeconomic and cultural barriers are addressed (11,21,22).

The relationship between overall cancer knowledge and whether it may predict for subsequent participation in cancer screening programs has been examined (19). Although increased knowledge generally predicted for increased participation in cancer screening programs, a direct cause-and-effect relationship could not be concluded, since in some cases knowledge was gained from prior screening experiences. Indeed, it was unclear whether prior screening predicted or increased cancer knowledge or whether knowledge predicted increased participation in cancer screening.

Similarly, in this study, compared with the African Americans in the target population, the OHP group had significantly higher cancer knowledge scores and a higher percentage received regular screening for breast and prostate cancer. Again, though, it is unclear if this improved knowledge lead to increased screening or whether the knowledge was gained from prior screening experiences. For this particular study, the results of the survey indicate a need to develop educational programs for the target community that would focus on the etiologies, warning signs, and natural history of cancer.

The 2 groups were similar with regard to cervical screening. This fact is most likely related to the ease at which Pap smears can be performed. It is surprising, though, that so few African American men in the target population (32%) reported ever having a digital rectal examination– a test that is, likewise, very easy to perform. This suggests another barrier to cancer screening may be physician reluctance to recommend or perform screening tests. Indeed, Griffith and Willliams have identified a number of barriers to cancer screening that primary care physicians must overcome to provide effective health care. These included confusion over standard screening guidelines, time constraints, knowledge deficits, and personal emotion (23).

In examining the beliefs and attitudes of the African Americans in the target population, further potential barriers to cancer screening can be identified. The first is the number of misconceptions and myths about cancer that are still very prevalent in this community. One explanation for this observance is cultural, in that, within the African American community an enormous amount of information is disseminated by word of mouth. This fact was actually illustrated in this survey when participants were asked how they would find a good doctor or hospital. The majority of the participants in the target population (70%) stated they would "ask a friend." Given that this mode of communication is so prevalent, many myths about cancer and health care are continually passed from generation to generation within the African American community. This observance would also suggest that effective educational methods should be targeted to small groups within the community and made as personal as possible, with less reliance on the mass media.

Another very important potential barrier that can be identified from these results is an attitude that has been termed cancer fatalism. This overall pessimistic view of cancer and cancer treatment in the African American community has been cited as an important barrier to effective cancer screening (15). Friedman et al. reported that among women participating in

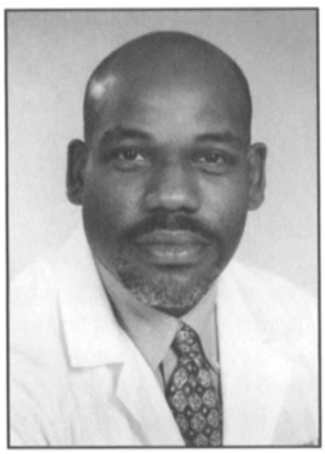
no-cost breast screening, African American women were more likely to report cancer-related fears and worries as barriers to mammography (24). Indeed, in the present study, a significantly higher percentage of the target community had an overall negative attitude towards cancer and felt that most cancers were incurable.

CONCLUSION

This study illustrates a number of differences that exist in the knowledge, attitudes, and beliefs of African Americans in a lower socioeconomic community compared with persons of a higher socioeconomic status. The results suggest that well-developed cancer educational programs might help to increase the participation of this community in cancer control programs. These educational programs would help inform the African American community about effective cancer prevention and screening, as well as help to dispel the cancer myths and misconceptions that still exist. These programs could also help to decrease the fatalistic attitudes that exist by addressing the fears and worries about cancer and cancer screening. These educational programs could also be used to help inform primary care physicians in the community of proper cancer screening guidelines.

Using the results of this study, the investigators, along with community members, have begun to develop an effective program of cancer control.

This research was supported by National Cancer Institute Grant #5 R01 CA64



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