
The Urban Church and Cancer Control: a Source of Social Influence in Minority Communities

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This research was supported by grant No. CA45847 from the National Cancer Institute, Public Health Service.

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Synopsis

A study was conducted to examine the efficacy of a church-based model of social influence in improving access to and participation of underserved minority women in a cervical cancer control program. The model expanded on strategies used in previous hypertension control and health promotion research.

A total of 24 churches, stratified by faith tradition, were randomly selected to participate in the cancer control program from a pool of 63 churches in a defined geographic area of Los Angeles County, CA. Female parishioners ages 21 years and older were eligible to participate in cervical cancer education sessions, and screening was offered to adult women who had not had Papanicolaou tests within the last 2 years.

Church participation rate was 96 percent. Thirty lay health leaders were selected by the clergy to serve as messengers, recruiters, and organizers for their respective congregations. Ninety-seven percent of these lay health leaders participated in two training sessions designed to prepare them for their leadership role. Social support structures such as child care, meals, or transportation for targeted women were organized by lay health leaders in 78 percent of the churches.

A total of 1,012 women between the ages of 21 and 89 years attended educational sessions. Forty-four percent of the eligible women were targeted for screening because they had not had a Papanicolaou test within the last 2 years or had never been screened. Black women were 6.6 times more likely than Hispanics to have been screened in the past 2 years. Hispanic women were 4.2 times more likely than African Americans never to have had a Papanicolaou test or been tested in 3 or more years. Overall, 90 percent of the women targeted for screening recruitment presented for tests.

Fifty-two percent of the churches initiated cancer control activities by the end of the 2-year period following the culmination of the intervention program.

The findings suggest that a church-based model of social influence can leverage the participation of minority women in cervical cancer control, provide access to underserved Hispanic women in particular, and sustain cancer control activities beyond the life of an intervention program.

The findings further suggest that a more discrete assessment of screening history may improve the participation levels of African American women, and that the gratis offering of screening services may adversely affect their participation rates.

THE IMPORTANCE OF CANCER as a major health problem in the United States is well recognized. Cancer ranks second only to cardiovascular disease as

a leading cause of death. When black-white mortality rates are compared, however, African Americans show an excess cancer mortality of 24 percent (1).

The disproportionate burden of cancer borne by African Americans is reflected further in morbidity and survival rates that position black populations, in comparison with whites, as more likely to develop cancer and less likely to survive it (1).

Although further research into the mechanisms underlying these differences and their significance is warranted; it is known that the improved rates among whites is attributable largely to their participation in risk reduction programs (2). In contrast, enlisting the participation of minority populations in cancer control has been less effective (1).

In hypertension control programs, approaches to outreach that produced significant improvements in participation levels have been identified (3-7). These approaches can be characterized by three primary factors: (a) the use of the church as an intermediary, (b) the inclusion of members of the church social network as agents of intervention, and (c) the grafting of program activities onto the natural support systems of the church community.

Previous research in health promotion has also concluded that the participation of key members of the church social network can have a positive influence on the process and outcome of church-based interventions (3,5-10). Not much light has been shed on the process for selecting key members, however, in previous research. The selection of these persons has consisted primarily of identifying a willing party. This tactic can produce extreme variation in the outcomes of intervention and in study replication efforts.

In contrast, social influence research by King (11) identified three attributes of human interaction that can be used to predict a person's potential to exert influence over a defined setting of which that person is a part. These attributes were self-projection (projecting a positive self-image), interpersonal comfort (demonstrating ease and competence in interpersonal communications with the group), and affiliative links (being an accepted and responsive member of the group).

Cancer control models have not used these strategies or fully applied the concepts of social influence (12). The results of previous studies on hypertension control and health promotion programs suggest that more effective use of indigenous institutional and social supports could increase the participation of minority groups in cancer control.

A study was conducted to examine the efficacy of a church-based model of social influence in reaching underserved African American and Latina women for participation in a cervical cancer control program. The model expanded on strategies used in previous

hypertension control and health promotion research. The study model included the following overall components:

- creating the conditions for church-based cancer control,
- establishing network leadership and social supports,
- implementing the interventions, and
- promoting continuity of leadership initiatives.

Methods

Churches. Twenty-four churches, stratified by faith tradition, were randomly selected from a pool of 63 churches in a defined geographic area of south and south central Los Angeles, CA. These churches had responded to a letter offering an opportunity to participate in Drew University's cervical cancer control program. Of the responding churches, 36 were Protestant and 27 were Catholic. The stratification resulted in equal numbers of Protestant and Catholic churches participating over a 2-year period. The church selection procedure did not control for ethnicity, since the church, not members of the congregation, was the unit of selection. There was a close association, however, between ethnicity and faith tradition. Fifty-four percent of the churches (12 Protestant and 1 Catholic) had a majority congregation of African Americans, and 46 percent of the churches (11 Catholic) had a predominantly Hispanic membership. The reported active membership per church ranged from 50 to 250 people.

Eligible church participants. All women ages 21 years and older were eligible to participate in cervical cancer education sessions, and screening was offered to adult women who had not been screened within the last 2 years. Church registries showed an average active adult female membership of 60 percent. Approximately 30 to 150 adult women were potential participants per church, or from 720 to 3,600 for the combined church population.

Instrumentation. An ethnographic assessment protocol developed and pretested by Davis (13) was used to guide the selection of leaders within the church social network. The protocol is an adaptation of a sociogram methodology developed by King (11) for the selection of school-based youth leaders. The ethnographic assessment protocol required three steps. First, the pastor was asked to identify three female parishioners who were "natural help givers," or persons to whom others in the congregation usually turned for advice. Next, these names were listed on

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the scale and the pastor was asked to identify which of the three persons was best characterized by each of 18 items describing self-projection, interpersonal comfort, and affiliative links. The person listed most frequently was named the lay health leader. The pastor was given an opportunity to confirm this choice and determine if the first and second place scorers should serve as a team.

Procedures. The following procedures were used for each phase of the research process:

Phase 1. Creating the conditions for church-based cancer control. Creating the conditions for church-based collaboration in cancer control involved two major tasks—(a) securing pastoral commitment to the church role as a partner-in-cancer-prevention and (b) selecting a lay health leader from the congregation.

The churches that responded to the written contact also returned a 1-page questionnaire that identified a contact person (for example, an assistant pastor, secretary, wife) who could usually be reached at the church to assist with further communications and noted the size of the active versus the registered membership of the church. The pastor and contact person were called at each church to establish the first meeting with the pastor.

Very often, pastors asked that the first meeting be held with the contact person. This approach seemed to suit better the working style and time constraints of many clergy. In no instance, however, did the meeting with the contact person substitute for the meeting with the pastor. When this alternative meeting arrangement was suggested, we indicated that we would not engage in any action with the church without the pastor's informed consent, and we explained the extreme importance in having the leader of the congregation personally endorse the proposed activities. In those instances, the first meeting was held with the contact person who would agree to arrange our meeting date with the pastor within 2 weeks.

The meeting dates were arranged for the convenience of pastors and included weekdays, evenings, and weekends. The meeting times ranged from 1 to 1½ hours.

A description of cancer facts that highlighted the problem of cervical cancer in minority communities was presented to the pastor. It served as the basis of our request for partnership with the church. In addition, a 1-page program overview was prepared for this meeting that included a listing of proposed activities and identified supports needed from the church (for example, pastors' leadership and active support of the program, 5 minutes during services to be introduced to the congregation, selection of a lay health leader among the parishioners, a large meeting room to conduct education sessions, a secluded room with doors to conduct the screening, and so forth). Pastors were asked to sign a declaration indicating their support as partners in cancer control. The ethnographic assessment protocol was used to assist pastors in selecting lay health leaders from the church social network.

Phase 2. Establishing network leadership and social supports. Preparing lay health leaders for their leadership role involved training and the selection of support structures that would be organized by the leadership. The lay health leaders were informed in writing and by telephone of their selection by the pastor. The pastor also announced his selection during church services in order to validate their leadership role. A meeting with each lay health leader (or team, as applicable) was held to acquaint her with the problem of cervical cancer, describe her messenger and support roles in the program, and identify the program staff person who would provide necessary resources (for example, publicity flyers, sign-up sheets, pamphlets, and brochures) in support of her role. They were also asked to select two dates from a list of 10 possibilities for training.

Two groups of lay health leaders were trained to serve as health advisers and site coordinators for their respective congregations in two training sessions. Sessions were limited to 30–45 minutes each in order to maximize attendance, and refreshments were served. The training sessions were highly focused and designed to prepare lay health leaders to (a) deliver specific messages on screening requirements for early detection of cervical cancer, the importance of followup care for persons with abnormal results and for treatment efficacy and (b) recruit congregation members and deliver messages with confidence. A training session was devoted to each objective. A leadership handbook was prepared for each leader

and included three brochures and five tip sheets for each of the training areas. Brochures and tip sheets presented clear and concise information written at a 6th grade reading level.

Each aspect of the program was reviewed in training sessions. Techniques included a 15-minute slide presentation (speakers kit) developed by the National Cancer Institute's Office of Cancer Communications, review, and discussion of the leadership handbook, and role-play of recruitment and message delivery strategies. Pre- and post-assessment was not used to reduce the potential for participant anxiety when learning new information for which they will be tested. A training evaluation was administered. Booster sessions were held as needed, since the program was implemented during a 2-year period.

The lay health leaders' role during the project period would include coordinating all dates and times for program activities at the church and leading the recruitment of women to education and screening sessions. In addition, the leaders were asked to select social support structures that they felt would enable the participation of women in education and screening sessions, and for which they could draw the support of the congregation. Lay health leaders (trainees) also arranged for child care, transportation, and meals for those attending the sessions.

Phase 3. Implementing the interventions. The congregation was provided an opportunity to become acquainted with the program staff members prior to the implementation of interventions. Program staff members were introduced by the pastor to the congregation during services held at least 1 week before the intervention program. The ethnicities of the program staff were similar to that of the congregation. A 5-minute presentation on the program was delivered to the congregation by the program director. All intervention staff members remained for the duration of the service in order to meet and greet parishioners.

Two components constituted the intervention program—education and screening. All adult women were recruited to participate in education sessions by lay health leaders who used church bulletins, service announcements, publicity flyers, and word of mouth. A 1-hour session was held immediately following the Sunday service(s) of the church in a large room, often the sanctuary. A 20–30 minute survey (English and Spanish versions) was administered to women in attendance to determine their screening history. The speakers' kit (15-minute slide presentation) on cancer prevention and control was used in the education sessions. A Spanish version of the English script was

Table 1. Age distribution for 943 women participants in church-based cervical cancer education project in Los Angeles, by ethnicity

Ethnicity	21–39 years		40–59 years		60–89 years	
	Number	Percent	Number	Percent	Number	Percent
African American..	289	49	197	34	102	17
Hispanic....	198	61	103	32	22	7
Other.....	17	53	9	28	6	19
Totals ...	504	53	309	33	130	14

Table 2. Years since last Pap test for 943 women participants in Los Angeles church cancer education project, by ethnicity

Ethnicity	1 to 2		3 or more		Never	
	Number	Percent	Number	Percent	Number	Percent
African American..	471	80	98	17	19	3
Hispanic....	37	12	240	74	46	14
Other.....	22	69	7	22	3	9
Totals ...	530	56	345	36.5	68	7.5

used as appropriate. A 10-minute presentation on the use of the Papanicolaou (Pap) smear in detecting cervical cancer and the nature and success of treatments for abnormal results followed. A question and answer period was conducted during the last 15 minutes, and women were informed of the screening date.

A conservative criterion for screening eligibility was used to identify underserved women within the church population. Adult women who had not had a Pap test within the last 2 years were recruited for screening by lay health leaders. A sign-up list was added to the screening recruitment strategies employed for education sessions. Screening also was conducted immediately following each service or on one date per church, and performed by two nurse practitioners. Intake was conducted by program staff members in a prepared area, and each person's last screening date was verified. Screening equipment, including gurneys and screens, were transported to the church site by program staff members. Two rooms with doors were used for screening. Women were informed of the date that results would be mailed to them and that followup care would be arranged for those with abnormal results.

Phase 4. Promoting continuity of leadership initiatives. The pastor and lay health leaders were involved in the planning for continued promotional

Table 3. Targeted women versus additional women screened in Los Angeles church cancer education project, by ethnicity

Ethnicity	Targeted women				Additional screens	Total screened
	Show		No shows			
	Number	Percent	Number	Percent		
African American ..	84	72	33	28	0	84
Hispanic	280	98	6	2	94	374
Other	9	90	1	10	23	32
Totals....	372	90	40	10	117	490

activities. A meeting with the pastor and lay health leader of each church was held to review participation levels and outcomes of the screening. The meeting was also used to develop long-term plans for continued promotion of cancer control messages and activities. Specific suggestions prepared by program staff members included annual meetings of the women auxiliaries on women's health, the use of project staff members to give presentations or educational materials, or both, and periodic health fairs for which program staff members could assist in identifying clinical resources and personnel.

Results

These are the results for each phase of the research:

Phase 1. Creating the conditions for church-based cancer control. Twenty-three of the 24 pastors consented to participate in the cervical cancer control program and signed the declaration of partnership, for a church participation rate of 96 percent. The pastor who declined was an interim minister and was not the pastor who responded to our initial contact. The interim pastor preferred to delay participation in the program until the permanent pastor had been selected. The result was 11 Protestant and 12 Catholic churches participated in the program.

Thirty lay health leaders were selected by the clergy, one leader each at 16 churches, teams of two each at 7 churches (4 Protestant, 3 Catholic). Fifteen percent more of the Catholic churches (four) in comparison to Protestant churches (two) selected members of the clergy (for example, nuns, assistant pastors).

Phase 2. Establishing network leadership and social supports. All 30 lay health leaders accepted their appointed role, and 29 (97 percent) attended both training sessions. One member of a team of two

indicated that she would be supportive but could not attend training meetings. All trainees evaluated the training sessions as good to excellent in preparing them for their roles.

The nature and organization of support structures varied by church. Eighteen churches (78 percent) organized support structures. Volunteers at 2 of the 18 churches provided child care, buses, and lunch for families attending the education and screening sessions held on a Saturday. Twelve of the 18 churches offered snacks and organized child care. Four churches provided lunch during which time children were supervised. Transportation assistance beyond that normally provided by the church on Sunday mornings was not needed for these churches, since interventions were conducted immediately after Sunday services.

Five churches (22 percent) did not formally organize support structures, but lay health leaders took personal responsibility for the care of children as needed during the intervention activities.

Phase 3. Implementing the interventions. Education and screening were conducted at 23 churches. Lay health leaders coordinated the dates, times, and locations for each church. A total of 1,012 women attended education sessions, and findings are reported for 943 women (93 percent) who completed the survey. The ethnic distribution of education participants was 62 percent African American, 35 percent Latino, and 1 percent Asian, 1 percent Native American, and 1 percent white. Women between the ages of 21 and 39 years represented 53 percent of the sample and were the largest participating group for blacks and Latinas (table 1).

The majority of women were married or living with a mate (51 percent), 30 percent were widowed, separated, or divorced, and 19 percent were never married. The great majority of African American women (95 percent) spent the first 12 years of life in the United States, whereas 91 percent of the Hispanic women spent these years in Mexico. (Questions concerning birthplace were not posed so as to avoid issues of immigration status).

The majority of women were employed (66 percent), and the average annual income range for African Americans was \$20,000 – \$24,999 per year, and \$7,500 – \$9,999 for Hispanics. The average number of children ages 17 and younger per household was two for African American women and three for Hispanics. Thirty percent of the women had combined household incomes below poverty level. Seventy-seven percent of the Hispanic women had less than 12 years of education, whereas 53 percent

of the African Americans had 2 to 3 years of college. One-third of the women were without health insurance, 54 percent had private coverage, and 13 percent were covered by Medicare or Medi-Cal. The usual source of health care was private providers for 59 percent of African American women and 35 percent of Hispanic women. Emergency rooms and county clinics were the usual providers of care to the remaining women.

The average number of women attending education sessions and completing the survey was 41 per church. Forty-four percent of the women were defined as underserved, since they had not had a Pap test within the last 2 years or had never been screened (table 2).

Black women were 6.6 times more likely than Hispanics to have been screened in the past 2 years. Conversely, Hispanic women were 4.2 times more likely than African Americans not to have ever received a Pap test or not to have received a Pap test in 3 or more years.

Women who had not been surveyed but met the eligibility requirements were also screened. Of these, 413 were targeted for screening outreach, 490 were recruited, for an average of 21 women per church. Ninety-four Hispanic women who had not attended education sessions presented for screening and 6 Latinas originally targeted for screening did not, for a total Hispanic group of 374 (table 3). Seventy-two percent of the African American women targeted for screening were recruited for Pap tests, and 33 were no shows. Twenty-three additional Asians, whites, and Native Americans were screened, and one was lost to recruitment. Overall, 90 percent (372) of the women originally targeted for recruitment presented for screening, and an additional 19 percent (N=117) were screened.

The majority of women screened were between the ages of 21 and 39 years, and 37 percent were ages 40 to 59 years (table 4). Hispanic, Asian, Native American, and white women were heavily represented among the younger age group, whereas black women were evenly distributed between the two.

Forty-eight abnormal Pap smears were identified, for an abnormal rate of 10 percent.

Phase 4. Promoting continuity of leadership initiatives. Fifty-two percent of the churches (8 Protestant, 4 Catholic) continued the cancer prevention campaign in the first 2 years following the end of the program period. Table 5 is an overview of the type and number of the promotional activities. Program staff members served as resource persons to lay health leaders. Additional participating agencies

Table 4. Ethnicity and age of 490 women screened in Los Angeles church cancer education project

Ethnicity	21 to 39 years		40 to 59 years		60 to 89 years	
	Number	Percent	Number	Percent	Number	Percent
African American..	33	39	32	38	19	23
Hispanic....	198	53	142	38	34	9
Other.....	17	53	9	28	6	19
Totals ...	248	51	183	37	59	12

Table 5. Number of church-initiated cancer control activities in 12 Los Angeles churches 2 years after intervention program

Activities	Post-program year	
	Year 1	Year 2
Health fairs	3	5
Interdenominational ministerial conference.....	1	...
Young adult seminars	1
Health ministry meeting.....	1	...
Adult Sunday school conference	1	...

in the church-initiated efforts were the Drew University campus of the Drew-Meharry-Morehouse Consortium Cancer Center, Central Los Angeles Unit of the American Cancer Society, and Association of Black Women Physicians.

Discussion

The high consent rate of pastors, participation rate of lay health leaders, and recruitment rate of targeted women add strength to the proposition that social influence models that use indigenous sources of social support can exert positive influence on the participation of minority women in cancer control. Similarly, the number and variety of cancer control activities initiated by lay health leaders following the conclusion of the intervention program offer support to the social influence approach to institutionalizing the promotion of cancer control in community-based settings.

The screening profiles of women also present opportunities for improvements in approaches to cancer control. The large majority of Hispanic women reporting screening intervals of 3 years or more suggests that church-based models may be particularly valuable in providing access to underserved Hispanic women. The observed pattern of screening may be due largely to the recent migrant status of the majority of Latinos in Los Angeles.

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Identifying access opportunities is significant, since migrants are more likely to use public health facilities than private ones where Pap tests are usually conducted in response to a presenting health problem as opposed to a prevention protocol.

The shorter intervals between screenings reported by the majority of African American women seem to reflect more frequent use of preventive care services. Issues discussed during the question and answer period following the educational sessions suggest that African American women make more frequent provider visits, but their receipt of Pap tests may be less frequent than reported. The majority of these women indicated that they had assumed a Pap smear was taken every time they had a pelvic examination, but they had no knowledge of their Pap smear result, the correct purpose of the Pap test, or memory of discussing a Pap test with their provider during the gynecological visit.

Since survey forms were administered at the beginning of the educational session and women were still uncertain by the end of the session, their survey responses were not revised. The frequency with which this issue was raised seems to suggest a need to have assessed, more discretely, the occurrence of the Pap test versus the pelvic examination. Distinguishing the two may improve needs assessments conducted by cancer control programs and providers of preventive gynecological services.

An additional factor influencing the screening participation rates of African American women may have been their perception of free services. In the question and answer period, women tended to characterize the gratis offering of the Pap test as a favor to the poor. These women objected to being perceived as poor, despite their feelings that they could not afford the cost of regular medical attention. Women also intimated that "free" services often results in "substandard" services in black communities. A token fee may have achieved greater

participation among the 32 percent of targeted black women who did not show for screening. The potential impact a token fee may have had on the presenting women, however, is difficult to evaluate. Since a goal of cancer control is to maximize the number of women screened, our experience suggests that caution should be exercised in the presentation of preventive services as free. It may be prudent to make this decision on a church by church basis and to enlist the assistance of the lay health leader in the decision.

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