

# Hispanic women's beliefs about breast cancer and mammography

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*Although breast cancer rates are lower among Hispanic women than among White women, Hispanics are more likely to die from this disease if they do get it. This may be related to the fact that Hispanic women are less likely to participate in mammographic screening. This study used a two-stage decision model to describe a group of rural, Hispanic women's beliefs and attitudes about breast cancer and mammography. The first stage consisted of exploratory interviews to identify factors, both positive and negative, that affect the mammography decision. The second stage will use a survey to weigh the identified factors in order to determine their importance to the decision. This article presents the stage 1 findings of this study. Twenty-nine rural, Hispanic women between the ages of 38 and 74 participated in the interviews. The majority had annual incomes of <\$10,000, and 30% completed ≤8 years of education. The subjects identified 18 factors, which fell into three general categories: Knowledge and Attitudes (How Well It Works, Personal Risk, Other Ways of Knowing, Fear of Cancer and/or treatment, Belief in Fate, Cultural Issues), Issues Related to Participation (Language, Getting There, Time, Cost, Radiation Exposure, Pain), and Social Concerns (Role Model, Responsibility to Self, Responsibility to Others, Influence*

*of Family/Friends, Influence of Doctors, Influence of Society). Verbatim description of each of these factors are presented. The implication of the findings to health professionals is discussed.*

**Key Words:** Mammography—Breast cancer beliefs—Hispanic women—Breast cancer detection—Multiattribute Utility Theory.

Despite advantages in diagnostic methods and treatment, breast cancer continues to be a leading cause of morbidity and mortality among American women. A major concern of health professionals is the disparity in breast cancer survival rates among women from minority and low-income populations. For example, even though breast cancer incidence rates are lower among Hispanic women than among White women, Hispanics are more likely to die from the disease (1). The major explanatory factors accounting for this inconsistency are the underutilization of screening techniques and cultural attitudes about preventive care (2-6).

The underutilization of mammography among minority and low-income women has been well documented (6-11). The National Health Interview Survey (12) found that Hispanics consistently reported lower participation in screening and early detection than did non-Hispanic women. Thirty-nine percent of white women aged >40 reported "ever" having a mammogram compared to 26% of Hispanics; likewise, the rates of mammography participation in the year prior

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to the survey were 17% for Whites and 13% for Hispanics. More than 31% of the Hispanic sample in this survey reported that they had never heard of a mammogram, compared to 12.2% of Whites.

A number of studies have examined factors that affect participation in mammographic screening (13-20). Although some of these studies have focused on minority populations, few if any have examined specific factors affecting rural, Hispanic women. Many of these studies that have been conducted among Hispanic women used telephone surveys or self-reported questionnaires and were conducted in urban settings (8,21-24). The identification of mammography barriers and facilitators are crucial to the development of effective and successful health education programs. Lack of participation in mammography may be related to the fact that programs designed to inform and encourage screening practices are not sensitive to the special concerns of Hispanic women (6). This study sought to identify the facilitators and barriers that influence the mammography utilization patterns of a group of low-income, rural, Hispanic women.

### THEORETICAL FRAMEWORK

The theoretical model that guided this research activity is a weighted utility model called the Multiattribute Utility Model (MAUM). The MAUM, which is a derivative of Subjective Expected Utility (SEU) theory, was originally developed by economists in the 1950s (25) and has been applied to health behaviors since the 1970s (26-28). The original purpose of this theory was to understand how consumers made choices about products that they purchased. When applied to health behaviors, the focus of interests is the health consumer.

The underlying premise of SEU (and, subsequently, the MAUM) is that individuals will choose a behavior that maximizes their perceived personal gains in a given situation. The level of personal gain is determined by assessing and comparing the perceived positive and negative influences on the behavior. Thus, the theory is used to identify and evaluate the importance of the array of factors that influence decision makers' behavioral choices. This knowledge can then be used to develop targeted strategies which consider factors determined to be the most important influences on behavioral choices. [For more detailed information about the MAUM and its use with health behavior, see Carter (29).]

The operationalization of the MAUM involves two stages of data collection. During the first stage, in-depth, exploratory interviews are conducted among a sample of the population of interest. The goal of these

interviews is to identify a complete and inclusive list of factors, both positive and negative, that affect the decision making process. This is accomplished through the use of open-ended questions and through the use of probes during the interview process. The probes consist of information about factors that are already known to influence the behavior of interest. At the beginning of the interviews, these probes are derived from the literature; as the study progresses, information from the ongoing interviews is added to the list of probes. The rigor and completeness of these interviews are critical to the success of the study.

Once interviews have been completed, a content analysis is conducted in order to identify specific factors that influence the behavior of interest. The identified factors are arranged into a hierarchical scheme; this hierarchy serves as the foundation for the development of a survey. The survey, which is used during the second stage of data collection, is distributed to another group of subjects from the same population. This survey will enable investigators to determine the importance of each of the factors by using a weighting system. The subjects are asked to "weigh" the influence of each of the identified factors by responding to statements that describe the "for" and "against" influence of these factors. The weight of each factor is then calculated and ranked in order to describe its relevant influence on the health behavior decision.

The purpose of this article is to provide a detailed description of the stage 1 findings of a study of breast cancer beliefs and attitudes of a group of rural Hispanic women using the exact words of the subjects. It is expected that this verbatim description of the subjects' concerns will generate an understanding of the phenomenon that is not possible when data are presented in an aggregate form. This knowledge can be used to provide health education that is more directly relevant to issues that have been identified as important by these women. The specific aims of this stage of the study were (a) to conduct exploratory interviews in order to identify specific reasons that Hispanic women do or do not participate in mammography and (b) to develop a hierarchical scheme of attributes related to Hispanic women's beliefs about breast cancer and mammographic screening. The hierarchical scheme will serve as the basis of a survey that will be used during the second stage of the study.

### METHODS

#### Sample Selection

The sample population for this study was selected from the Hispanic community in the Yakima Valley in

Washington State. It is estimated that 23.9% of the population in the valley is Hispanic and the majority are of Mexican descent (30). A first step in the recruitment of the study sample was to select local intermediaries who could assist in the identification of appropriate subjects. Three intermediaries, who consisted of Hispanic women who worked in social or health agencies in the Valley, were identified with the assistance of a community health nurse who had provided outreach services in this community for a number of years. The intermediaries were provided with a script which described the study and which could be used in the recruitment process. They were instructed to identify eligible women (Hispanic, aged  $\geq 40$ ), to describe the study to them, and then to invite them to participate in the study. Some of the subjects were obtained through the intermediaries' personal and professional contacts. Additionally, media sources, including the local Spanish language newspaper and the local Spanish language radio station, provided public service announcements about the study, including an invitation to call for further information. Interested women were asked to call one of the intermediaries who served as the coordinator of this process.

### Data Collection

The purpose of the explanatory open-ended interviews for this first phase was to describe the subjects' attitudes and beliefs about breast cancer and to determine factors that may influence their decision to participate or not participate in regular mammography screening. The interviewers consisted of the three women who served as intermediaries during the recruitment phase. Two of the women worked for a social agency, and one worked for a public health clinic in the Yakima Valley. All of these women had experience conducting interviews among Hispanic women; all were Hispanic, and all were fluent in both Spanish and English. The interviewers were especially trained by the investigator to conduct the in-depth and inclusive interviews according to the methods described for the Multiattribute Utility Model. The probes used for this study were derived from the literature, including a previous study by the same investigator (31). The instructions for the interviewers included practice sessions with the investigator as well as a pilot with at least one sample. The interviewers were instructed to obtain a written consent from all subjects prior to the interviews. The majority of the interviews were tape recorded with the subject's approval. In the few cases when subjects would not agree to be recorded, the interviewers kept notes. For the most part, the interviews

occurred at the subjects' homes. In some cases, they occurred in a private office that was available to the interviewers.

In order to validate and expand upon information collected during the interviews, a focus group that included the investigator, the three interviewers, and a convenience sampling of three interviewees was conducted. The focus group consisted of a 2-h session during which the women discussed their feelings about mammography and breast cancer. Information from the interviews was used as probes to encourage discussion and to expand upon information collected at the interviews.

Following the interviews, the transcribed tape recordings and interviewers' notes were entered into an Ethnograph program (32) for analyses. The Ethnograph was used to identify themes from the interviews and ultimately specific factors that affected these women's mammography decision. These factors were then arranged into a hierarchical scheme later used to develop the survey for stage 2 of the study. The following section presents selected excerpts from the interviews and the focus group in order to provide examples of the subjects' descriptions of the identified factors.

## RESULTS

### Sample

A total of 29 Hispanic women participated in this phase of the study. The mean age of the sample was 52.8 years; the range was 38–74 years of age. (One 38-year-old subject selected by an intermediary was included in the analysis per the interviewers' request.) Over 60% of the subjects were aged  $\geq 50$ . Table 1 provides a demographic profile of the sample. The majority of subjects had annual incomes of  $< \$10,000$ , and  $> 30\%$  had completed  $\leq 8$  years of education. Nearly 80% of the subjects reported their religion as Catholic. Four of the subjects reported never having had a mammogram, and three of these were aged  $< 50$  years. Six of the subjects stated that they did not know what a mammogram was even when the term "breast x-ray" was used.

### Categories of Identified Factors

As a result of the content analysis of the interviews, three general categories of factors emerged: Knowledge and Attitudes, Issues Related to Participation, and Social Concerns (Fig. 1). Each of these general categories included six subcategories: Knowledge and Attitudes includes How Well It (Mammogram) Works,

**TABLE 1.** *Hispanic mammography study: demographic profile of phase 1 subjects*

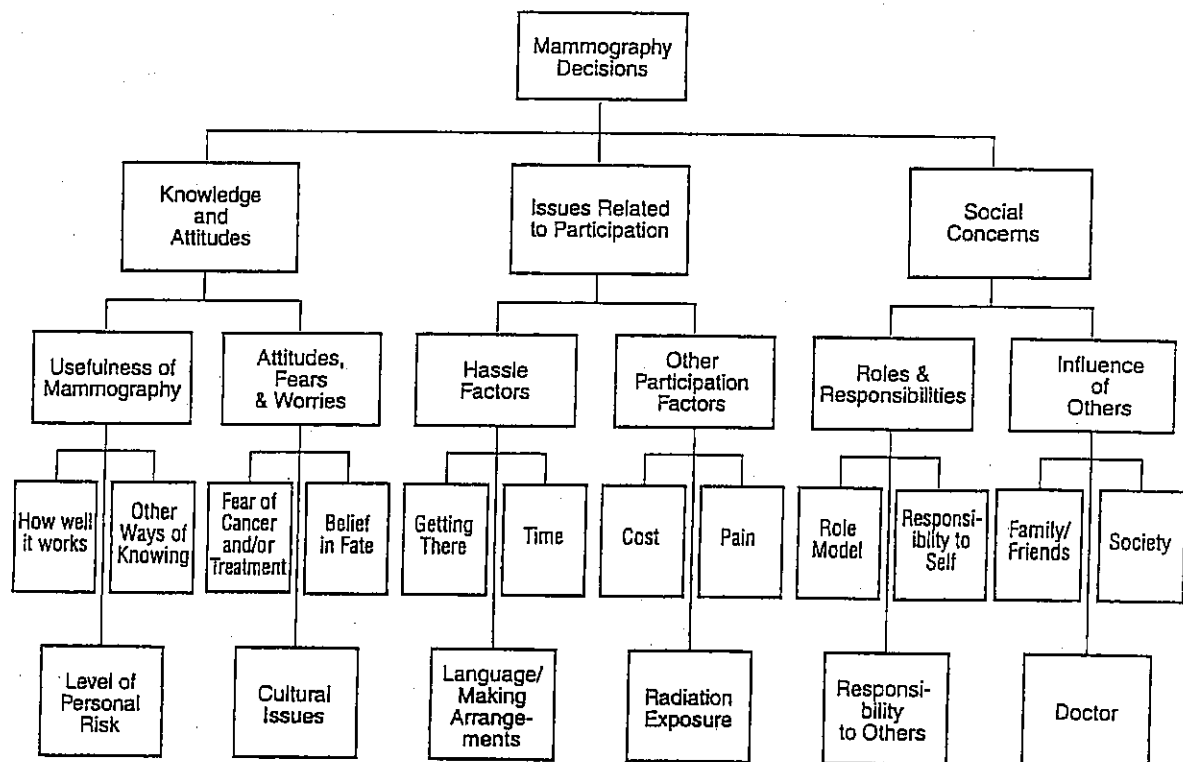
	Phase 1 (n = 29)	Percentage
Age (years)		
<40	1	3.4
40-49	10	34.5
50-59	12	41.4
>60	6	20.7
Family income (annual)		
<\$10,000	25	86.2
10,000-20,000	2	6.9
20,000-30,000	0	0.0
30,000-40,000	1	3.4
Marital status		
Single	3	10.3
Married	17	58.6
Separated	3	10.3
Divorced	4	13.8
Widowed	2	6.9
Education		
≤8 years	9	31.0
9-12 years	11	37.9
≥13 years	4	13.8
No response	5	17.2
Religion		
Catholic	23	79.3
Protestant	2	6.9
Jewish	1	3.4
Other	1	3.4
None	2	6.9

Level of Personal Risk, Other Ways of Knowing about Breast Cancer, Fear of Cancer/Treatment, Belief in Fate, and Cultural Issues. Issues Related to Participation includes Language/Making Arrangements, Getting There/Accessibility, Time, Cost, Radiation Exposure, and Pain. Social Concerns includes Being a Role Model, Responsibility to Self, Responsibility to Others, Influence of Family and Friends, Influence of Doctor, and Influence of Society. The following section uses the exact words of the subjects to reflect the meaning of each of these subcategories.

**Knowledge and Attitudes**

*How Well Mammograms Work*

Statements regarding the efficacy of the mammogram indicated that most women believed that mammograms had the ability to detect cancer if it was present. In fact, none of the subjects made any statement which would suggest that they thought mammograms were ineffective. For example, even though the following woman had not had a mammogram, she stated "I know plenty of women who have had it [mammogram] done and I feel that they do it because it's a good thing."



**FIG. 1.** Hierarchy of factors contributing to Hispanic women's mammography decision.

Another woman who had had three mammograms voiced similar support of its efficacy: "I wanted it done for my own benefit. I felt much better after I had it because I knew I did not have cancer. You feel good when you have this exam and they say you don't have anything." She added, "[c]ancer runs in my family."

Finally, this confidence in the efficacy of the exam is further supported by this statement: "I need to have this exam so I will know if I'm all right. It will tell me whether something is wrong with my breasts." None of the women indicated any awareness of controversy regarding the exam, nor did any indicate that they felt it would not do what it was intended to do.

#### *Level of Personal Risk*

Level of risk was associated with general attitudes about the usefulness of prevention behaviors as well as with beliefs about the perceived causes of breast cancer. The range of beliefs about personal risk were reflected in a variety of comments made by this group of women. Some statements suggested that the subject viewed the health system as a disease-oriented system; thus, there was no reason to access services unless one was ill: "If I felt something was wrong, if I was sick, then I would go to the doctor. I feel fine so why should I go have this exam? I just feel no need for it." And another, "I make an appointment if I'm really sick. But otherwise I won't go." Others however, were more supportive of a prevention orientation: "I don't have breast cancer, but I do have cancer in my family, and so that is what I'm afraid of. That's one reason I have my Pap Smear and my mammogram."

The perceived cause of breast cancer also had an effect on feelings of risk. The following observation was made by one of the interviewers at the focus session: "Some women feel that if you breast feed, you won't get cancer. So they say they don't need this exam because they breast fed their babies."

The notion that breast cancer is a "female disease" and that female diseases are associated with sexual activity is suggested in the following statement: "Why should I see a doctor? I'm not being sexually active. I don't need to be intimate with men. Why should anything go wrong with my body? It's not being touched. It's not being mishandled. Why then?"

#### *Other Ways of Knowing*

In keeping with the belief that one doesn't go to the doctor "unless there is something wrong," many women rely on other ways of knowing about breast cancer. Several comments suggest that some of the subjects think that symptoms of some sort will occur if

breast cancer is present and that these symptoms will be an incentive to seek health care.

"I haven't felt the least bit of discomfort. You only need to have this exam when you feel a pain in your breast. You need to get this exam when you have a lump or some discomfort. At that moment, that's when one needs to go to the Center de Salud [Health Center] because cancer of the breast usually causes pain."

#### *Fear of Cancer and/or Treatment*

Some women fear that they will be disfigured if they get breast cancer. "I am afraid. I don't want to have an operation. I wouldn't want to have one breast big and one breast small," said one woman. "If they had to operate on one breast, I would ask that they do the same thing to the other breast, so that they are the same . . ."

There were several statements, such as the following, which suggested a fear of cancer itself: "One knows clearly, cancer is something big, true? And something fatal." Others expressed fears related to the response of others to a diagnosis of breast cancer. Of particular concern was the response of husbands as reflected in this statement: "If I were to have this exam and it was to come back positive, then my husband would wonder: How did I get this? How is this possible?" This woman went on to describe what she perceived to be causes of breast cancer, including sexual activity and a physical mishandling of the body.

#### *Belief in Fate*

The majority of the women interviewed stated that they did not feel that breast cancer was determined by fate. One woman did support this belief stating that "what God sends, one has to accept." She went on to say, however, that although "many times God sends us illness, he can also help us if we have faith." A more extreme belief is reflected in the following statement by another woman: "If I do something bad, then I will get punished." This woman then speculated, "that could be why someone gets sick."

#### *Cultural Issues*

Several women identified specific cultural barriers that they felt interfered with participation. Many of these were described in the third person as if they were speaking for the community of Hispanic women: "The Latin women have moral beliefs; it comes from their roots. We don't want to expose our breasts." Another woman said: "It would embarrass me that a man I didn't know manipulated my body in this manner. It embarrasses us Mexican women more than it does a white person to have an exam like this. I will go to the

doctor when I have my babies. Otherwise it is just too difficult to endure."

Some women said they felt disloyal to their husbands if they went to the doctor. They said that when they discussed a personal part of their body with a man, even if it was the doctor, they could only perceive him as a man. "Hispanic women do not feel that it's appropriate to talk about their bodies, especially to men."

Some stated that they would only go to a female doctor. Others stated even that was embarrassing: "The thought of laying there with nothing on and having the most intimate part of your body exposed is too much. I just can't do it." Another said that her doctor always had his female nurse present when he performed an exam, and this made it more acceptable to have a male doctor. The ideal would be, according to one woman, "a women doctor who did not charge too much."

### Issues Related to Participation

#### *Getting There/Accessibility*

Many women in this Hispanic community tend to be very isolated. They do not drive, and, therefore, they have to depend on others to transport them. They may be virtually confined to their house unless their husbands choose to take them somewhere. "My husband works and I can only go if my husband takes me to the doctor."

Some do not have a car within their households. Others say they have no one with whom to leave the children (or grandchildren). "I don't drive. We don't have a car. And even if I did drive, who would take care of the children?" Even if they could get there, accessing services was also a serious concern for some. These women said that they could not access health services because they were undocumented. They are afraid they will be asked to present citizenship papers.

#### *Language/Communication*

Several of the women in this study spoke only Spanish. Despite the fact that there is a large Hispanic population in the Valley, many of the service providers do not speak Spanish. Language, therefore, emerged as an important barrier to making the necessary arrangements to get a mammogram. "There are many difficulties when you don't speak the language. You can't ask questions and you can't make an appointment to get the exam."

Knowing one cannot communicate with their provider is a disincentive to seek health care services, particularly preventive services. In the following statements, a woman explains why she hasn't had a mammogram: "Because I don't understand the doctor. They

speaking only English, I speak only Spanish. It embarrasses me." She went on to say, "I suppose if I was really sick, I would go . . ."

In general, a number of women said that even if there were not language barriers, they did not know where to go for a mammogram, how to arrange it, and even what it is called. The doctors never mentioned it to them, and they felt uncomfortable asking. "We aren't educated to be open and all this. One doesn't know how to ask questions or to explain their concerns to the doctor."

#### *Time*

Time is frequently a barrier for these women, many of whom work in the field or the canneries. "It's just that I haven't got the time in the day to do it [have a mammogram]. I can't leave work and I just have too many things to do when I am home. I keep thinking I will do it later . . . but I put it off and put it off . . ."

Many stated that facilities were not readily available in these rural settings and that they did not have the time to go out of their communities to get a mammogram. "You have to go out of your hometown; and I haven't got the time . . ." This was complicated by the fact that transportation was not available: "and furthermore, I don't have a car so I couldn't get there anyhow." Others describe lack of time: "I don't have the time. That's my excuse; I just don't have the time."

#### *Cost*

As expected, many women identified cost as an important barrier. "It costs money and we don't have the money. We only have enough for the rent." A woman who worked in a clinic stated, "[p]eople that work in the fields are short on resources, and often they have very large families. They simply don't have money to go to the doctor."

This was supported by a statement from a woman who worked in the fields with her husband: "We barely have money for our family's needs. I must use the money to take care of my children. They need food and clothes. How can I pay for these things [doctor's visits and mammograms]?"

#### *Pain*

Most women did not consider pain related to the procedure a factor in their mammography decision. The few women who did seemed to have a stoic attitude about it: "Yes, the pain can be quite bad, but I guess you have to take it." Another said, "I have a high pain tolerance so this doesn't affect me."

### *Radiation Exposure*

Possible exposure to radiation from the mammogram did not emerge as an important concern for these women. As stated by one woman, "[y]ou risk radiation with everything really, even with what you eat. I am not really worried about radiation with this exam." The importance of the exam in relation to the risk of radiation exposure is noted by this woman: "There are many times you can't say no to x-rays. I have concerns about this, that something will develop because of this, but I do it because I think it's important to have it done."

### **Social Concerns**

#### *Role Model*

Health behaviors may be learned (or not learned) from one's parents. "My parents never educated me this way. They didn't talk to us about this. I will have it done because I want my children to know how to take care of themselves. I have to be a role model for them." One woman called it "planting seeds." She said, "[i]f we do it, then our daughters will know that they should do it, too."

#### *Responsibility to Others*

Some viewed their responsibilities as reasons that they did not have a mammogram. "In Mexico, it is the tradition that we take care of our families. This is the Mexican way. It is not for us to be sick; we ignore it. You ignore everything. You have to be really sick, almost dying, when it is too late."

Conversely, several women commented that the Hispanic women's strong sense of responsibility was a motivation to have a mammogram. "One needs to know if they are sick. We need to think of our children and our family. It takes only a few minutes, and then you have your whole lifetime to take care of your children."

#### *Responsibility to Self*

One woman felt that the strong responsibility to family was replaced by a responsibility to self "once they no longer have children to take care of. Then it's okay for us to focus on ourselves and our health care." Another said simply, "[o]ne needs to know if they are sick. It's what one has to do. If it's necessary, one has to do it . . . It's a personal thing. If we don't do it, afterwards you're going to be tormented and only tolerating yourself because you got sick because you didn't take care of yourself . . . and you don't have anyone to blame but yourself."

#### *Influence of Family/Friends*

The influence of family, particularly husbands, was mentioned by several of the interviewees. "There are

the macho husbands. They don't want their women to leave the house. They don't want them to get this." One woman described how her husband would harass her if she said she was going to the doctor. He would tell her all of the things that the doctor would "enjoy" doing to her, as if he (the doctor) was doing it for his own pleasure.

#### *Influence of Doctor*

Many of the women said that they did not know what a mammogram was because "the doctor never mentioned it to me." They went on to say the following: "No one has told me I needed this. That is why I haven't had it done." As noted by one of the interviewees, "many of these women who are over 50, late 50s, early 60s, say that they have never had a physician mention having a mammogram."

On the other hand, some women indicated that the doctor's recommendation was the reason that they did have the exam: "My doctor recommended it to me because he says it is good to do this exam once every year. For this reason, I believe in it . . ." This was supported by a woman in the focus session who stated that "if the doctor fails to give information to the women, they will not get their mammograms. On the other hand, when the doctor tells the woman to get a mammogram, they will make an effort to comply."

#### *Influence of Society*

Societal influences were less frequently mentioned. However, a few women mentioned that information about breast cancer serves to increase Hispanic women's willingness to discuss it openly: "Hispanic women are hearing a lot more about this (breast cancer). It's announced on TV in Spanish programs. I think it's more open now than it was before." Society's message was readily accepted by this woman who was discussing media coverage of breast cancer detection: "We are able to find out more these days. If we listen and pay attention, we will know what we should do. It is important that we pay attention to these messages."

## DISCUSSION

This study as the first stage of a larger study is intended to provide a general overview of the special concerns of this group of rural, Hispanic women. The advantage of this presentation is the richness that is inherent in the words of the subjects as they describe their breast cancer-related beliefs. Because of the rigor of the techniques used in this process, it is felt that the range of beliefs presented here is a broad representation

of the many concerns that may prevail in other similar communities. The next stage of the study will determine how important each of these factors are to other women within this group of rural, Hispanic women. It will compare the beliefs of women who do participate in mammography with those who do not participate as a means of understanding factors, both positive and negative, that may affect the mammography decision.

The subjects in this study had varying degrees of experience with the health care system. More than 85% of these women reported that they had never had a mammogram. The fact that six of these women reported that they did not know what a mammogram was is particularly troubling in view of the great amount of publicity that mammography has received in recent years. This fact alone suggests that we are not reaching a large segment of our population with the usual media and health education programs. Furthermore, even when programs are developed, there is often a general lack of attention to developing interventions that are sensitive to the cultural concerns of participants (1,23).

There was a wide range of opinions and beliefs reflected in the statements made by the women interviewed for this study. There was a general consensus that mammograms are an effective means of finding out if something is wrong; yet, there were many and substantial barriers to participation in this health behavior. Many of the women simply did not know anything about mammograms, and those that did often had misinformation about breast cancer and early detection. The comments suggest that there is a lack of perceived susceptibility, related to a misunderstanding about the causes of breast cancer.

In keeping with findings from previous studies (1,24,35), many statements reflect a general lack of belief in preventive services; rather, health care is seen as a service for the ill. The lack of belief in prevention may be related to a feeling of powerlessness, a condition that often prevails among groups with low socioeconomic status who are overwhelmed with the struggles of their day-to-day existence (1). Some of their comments seem to reflect a degree of stoicism, which, likewise, may be related to this sense of powerlessness or helplessness. Statements about pain and radiation exposure, for example, seem to be saying the following: "One must do what one must do"—without concern for the comforts or dangers to one's self.

Statements related to cultural beliefs were particularly powerful examples of barriers to mammography. The strong sense of embarrassment, which some related to their moral beliefs, was clearly an important disincentive to participating in this procedure. The fact

that some of them only see their health care providers when they are pregnant is an indication of the strength of this cultural feeling.

The number of physical and logistical barriers to health care services suggests a general lack of a system's responsiveness to the special needs of this population. The provision of language and transportation services, it appears, would alleviate two major barriers to health care. Even concerns about cost should be less of a barrier than it appears it is with these women. Most are eligible for reduced rate or free services that exist as well as for public assistance. The fact is they simply do not know how to access these benefits. Scheduling considerations would be a positive step in alleviating time barriers among working women. Providing mobile services at the work locations could be a step towards improving the rates of participation in mammography.

The importance of family responsibilities was clearly articulated by several women in this study. The tradition of responsibility towards family even at the expense of their own needs is deep-rooted and deeply entrenched in their belief systems. Responsibility as a barrier or facilitator of early detection is seldom mentioned in the literature, but, considering the statements of these women, it may have a profound effect on this group of women's health behavior decisions. This responsibility may be compounded by the attitude of husbands, who are dominant in many of these households. Many of these women are already feeling oppressed as a result of their poverty. The husbands' active lack of support simply adds another dimension to this oppression, likely discouraging any inclinations to participate in preventive behaviors.

The fact that the women felt that their doctor was an important influence on their decision is supported by several other studies (7,10,21). The problem with putting too much importance on this as a strategy for increasing participation is the fact that many of them hardly ever see their doctors, for some of the reasons already discussed. Nevertheless, this should be considered as a factor in health education programs. Assuring that women who do seek health services are informed regarding the usefulness of mammography as a screening technique and are encouraged to participate may result in increased participation among this group of women.

A major limitation of this study was the fact that the investigator had limited control over the data collection process. It is possible that the responses of the participants may have been influenced by the biases of the interviewer. The sample size was limited due to funding constraints; however, it is felt that the size was ample for the purposes of the analyses described in this



article. Another possible limitation is the fact that the subject pool may have been limited. Hispanic women who were more isolated and intimidated by this process did not participate in the study. They may have had concerns that were different than those of the population in this study. A major strength of this study is the rigor of the process. The findings were enriched by the method of data collection: the process of obtaining information in the words of the sample.

### CONCLUSION

A number of studies have documented the fact that Hispanics tend to use health services less than other ethnic groups (23,33). We must continue in our efforts to understand the specific concerns of Hispanic women. There is a dearth of studies examining issues that are important to Hispanic women. Furthermore, the fact that there is great diversity within the Hispanic community is frequently overlooked. There may be very different beliefs among Hispanics, depending on their country of origin and the socioeconomic conditions that predominate in their communities.

Interventions using findings such as these need to be developed and tested. This type of information serves as an important base of knowledge that needs to be applied to program development. Too often, programs are developed with little concern for the "real" issues that affect participation. Only by being attuned and responsive to the specific needs of groups of people can we hope to be successful in our ultimate effort, which is to decrease the pain and suffering associated with advanced breast cancer.

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### REFERENCES

- Ramirez AG, MacKellar MA, Gallion K. Reaching minority audiences: a major challenge in cancer reduction. *Cancer Bull* 1988;40:334-43.
- Delgado DJ, Lin WY, Coffey M. The role of Hispanic race/ethnicity and poverty in breast cancer survival. *PR Health Sci J* 1995;14:103-16.
- Hunter CP, Redmond CK, Chen VW, et al. Breast cancer: factors associated with stage of diagnosis in black and white women. *J Natl Cancer Inst* 1993;85:1129-37.
- Threatt B. Early detection of breast cancer. *J Am Med Wom Assoc* 1992;47:152-4.
- Bassett MT, Krieger N. Social class black-white differences in breast cancer survival. *Am J Public Health* 1986;76:1400-3.
- Millon-Underwood S, Sanders E, Davis M. Determinants of participation in state-of-the-art cancer prevention, early detection/screening, and treatment trials among African-Americans. *Cancer Nurs* 1993;16:25-33.
- Fulton JP, Rakowski W, Jones AC. Determinants of breast cancer screening among inner-city Hispanic women in comparison with other inner-city women. *Public Health Rep* 1995;110:476-82.
- Longman AJ, Saint-Germain MA, Modiano M. Use of breast cancer screening by older Hispanic women. *Public Health Nurs* 1992;9:118-24.
- Bergner L. Race, health, and health services [Editorial]. *Am J Public Health* 1993;83:939-41.
- Vernon SW, Vogel VG, Halabi S, Jackson GL, Lundy RO, Peters GN. Breast cancer screening behaviors and attitudes in three racial/ethnic groups. *Cancer* 1992;69:165-74.
- Lane DS, Polednak AP, Burg MA. Breast cancer screening practices among users of county-funded health centers vs. women in the entire community. *Am J Public Health* 1992;82:199-203.
- Cockburn J, Murphy B, Schofield P, Hill D, Borland R. Development of a strategy to encourage attendance for screening mammography. *Health Educ Res* 1991;6:279-90.
- United States Department of Health and Human Services Vital and Health Statistics. *Breast cancer risk factors and screening: United States, 1987. Series 10: data from the National Health Interview Survey*. DHHS publication no. (PHS) 90-1500.
- Schechter C, Vanchieri CF, Crofton C. Evaluating women's attitudes and perceptions in developing mammography promotion messages. *Public Health Rep* 1990;105:253-7.
- Frazier TG, Cummings PD. Motivational factors for participation in breast cancer screening. *J Cancer Educ* 1990;5:31-4.
- Lerman C, Rimer B, Trock B, Balshem A, Engstrom PF. Factors associated with repeat adherence to breast cancer screening. *Prev Med* 1990;19:279-90.
- McLelland R. Screening for breast cancer: opportunities, status, and challenges. *Recent Results Cancer Res* 1990;119:29-38.
- Montano DE, Taplin SH. A test of an expanded theory of reasoned action to predict mammography participation. *Soc Sci Med* 1991;32:733-41.
- Richardson A. Factors likely to affect participation in mammographic screening. *N Z Med J* 1990;April 11.
- Rutledge DN, Hartmann WH, Kinman PO, Winfield MD. Exploration of factors affecting mammography behaviors. *Prev Med* 1988;17:412-22.
- Zapka JG, Stoddard AM, Costanza ME, Greene HL. Breast cancer screening by mammography: utilization and association factors. *Am J Public Health* 1989;79:1499-502.
- Fulton JP, Feldman JP, Donnelly EF, et al. Evaluating a mass media campaign to promote screening mammography in Rhode Island, 1987-1988. *RI Med J* 1992;75:9-15.
- Fox SA, Stein JA. The effect of physician-patient communication on mammography utilization by different ethnic groups. *Med Care* 1991;29:1065-82.
- Stein JA, Fox SA, Murata PJ. The influence of ethnicity, socioeconomic status, and psychological barriers on use of mammography. *J Health Soc Behav* 1991;32:101-13.
- Fox SA, Roetzheim RG. Screening mammography and older Hispanic women: current status and issues. *Cancer* 1994;74:2028-33.
- AMC Cancer Research Center. *Breast and cervical screening: barriers and use among specific populations. A review of literature prepared for public health planners*. Cooperative agreement no. U50/CCV806186-02. U.S. Center for Disease Control, 1992.
- Upmeyer A, Six B. Strategies for exploring attitudes and behavior. In: Upmeyer A. ed. *Attitudes and behavioral decisions*. New York: Springer-Verlag, 1989.
- Carter WB, Beach LR, Inui TS. The flue shot study: using multiattribute utility theory to design a vaccination intervention. *Organizational Behav Human Performance* 1986;38:378-391.
- Paskett ED, Carter WB, Chu J, White E. Compliance behavior in women testing a decision model. *Med Care* 1990;28:643-52.
- Salazar MK, Carter WB. Breast self-examination beliefs and behaviors: an evaluation using a multiattribute utility model. *West J Nurs Res* 1993;15:403-21.