

PREDICTORS OF BREAST SELF-EXAMINATION
AMONG MEXICAN AMERICAN WOMEN:
A PATH ANALYTIC MODEL

by

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ABSTRACT

This paper is a test of several hypothesized predictors of frequency of breast self-examination among low-income Mexican American women. Current research points to several factors as important predictors of preventive care. Among these are self-efficacy -- one's perceived capacity to perform a given action -- and social support from significant others. For Mexican Americans, environmental barriers to health care are important factors. While findings are inconclusive regarding the role of language proficiency as a predictor of preventive care, the model includes this as a hypothesized predictor of frequency of breast self-examination. The findings show a strong relationship between self-efficacy and frequency of breast self-examination. Barriers to health care have a weaker direct effect upon breast self-examination. The effects of English-language proficiency are indirect and mediated by self-efficacy.

IMPORTANCE OF PREVENTIVE CARE

Delayed diagnosis of serious disease among Hispanics is a critical problem. In a cross-sectional study of San Antonio Mexican American and Anglo females, Daly, et al. (1985) found important differences between the two groups at first diagnosis for breast cancer. Significantly more Mexican American women over 50 years of age, compared to Anglo women, had larger tumors, auxiliary node involvement and showed an estrogen negative receptor status at time of breast cancer diagnosis. Solis, et al. (1985) also found the rate of invasive cervical cancer in Mexican Americans to be two times as high as for other whites. Samet, et al. (1987) examined cancer survival rates by ethnic group for 31,465 incident cases diagnosed from 1969 to 1982 in New Mexico and Arizona. Hispanic cancer patients were significantly more likely to have more advanced cancers at first diagnosis than were whites. One-and five-year survival rates were computed for each type of cancer. Overall, one-and five-year survival rates for Hispanics were significantly lower than for Anglos. Hispanics were also significantly less likely to have received treatment for the cancer after initial diagnosis when compared with Anglos.

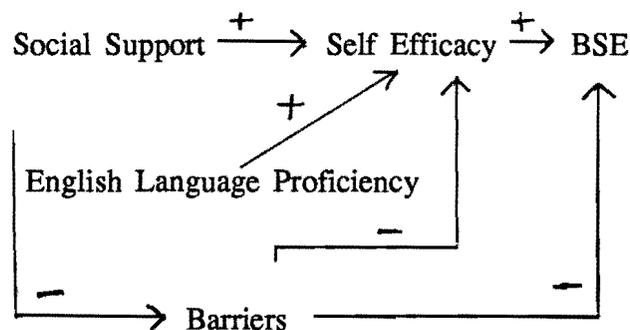
The data clearly indicate that Mexican Americans are less likely to engage in preventive care, are diagnosed later for cancer, delay treatment once cancer is diagnosed, and show poorer survival rates.

SUPPORTIVE LITERATURE AND HYPOTHESES

Previous research explaining preventive health behavior has focused on several factors which have been shown to predict compliance to therapeutic regimens and self-care. Three of these, self-efficacy (Bandura, 1977, 1982 a,b), social support (Israel, 1983 and others) and barriers to utilization (Hochbaum, 1985; Estrada, 1987), are interrelated factors which both directly and indirectly affect preventive health care. Based on the research dealing with preventive health care, the proposed model is illustrated in Figure 1 as follows. This model postulates that breast self-examination (BSE) as a form of preventive health behavior is directly and positively affected by self-efficacy. Self-efficacy is in turn affected directly and positively by social support from members of the social network and by English-language proficiency. It is directly and negatively affected by barriers to utilization. Social support has direct negative effects on barriers to utilization. Thus the effect of social support on preventive health care is entirely indirect. Frequency of breast self-examination is postulated to be directly related to self-efficacy and to barriers to utilization.

Figure 1

Theoretical Model of Preventive Health Care



Self Efficacy

Self-efficacy, or one's perceived capacity to perform a specific behavior, is an important predictor of adherence to therapeutic or preventive regimens (Sackett and Haynes, 1976; Bandura, 1977, 1982a,b) and to maintenance of such behavior over time. Research by Bandura (1982a,b) substantiates this. If an individual judges him/herself to be capable of executing a given action, he/she will perform the action more proficiently. Personal efficacy is essential to proficient and sustained performance (O'Leary, 1985), because of the cognitive-action link between the estimation of one's own abilities and actual behavior. Chambliss and Murray (1979) found that those who were more efficacious lost significantly more weight than those scoring low on self-efficacy. In a study by Gilchrist and Schinke (1983), it was found that adolescent females with higher self-efficacy were more likely to report continued contraceptive use at the six-month evaluative follow up. Condiotte and Lichtenstein (1981) also found a relationship between high self-efficacy and successful smoking cessation over time.

Self-efficacy may vary according to the complexity of the focal task. (Kegeles and Grady, 1983; Bandura, 1977, 1982a,b). For example, taking a fiber/calcium supplement is a simple act, while introduction of fiber via dietary modification requires a more complex set of behaviors. Dietary modification encompasses new or unfamiliar food selection and purchases, meal planning and preparation, as well as negotiation with family members to cooperate. The more complex the new set of tasks, the more likely that less self-efficacious individuals will experience anxiety and resistance to adaptation (Bandura, 1982a,b).

Self-efficacy is affected by the social environment in which the individual operates. Self-efficacy stems from environmental cues that reinforce or decrease its strength (Bandura, Adams, and Beyer, 1977; Biran and Wilson, 1981; Feltz, et al., 1979). Others in the social environment can reinforce the appropriateness of a given behavior, teach or model correct

behaviors and provide feedback to affect self-efficacy (Bandura, Reese, and Adams, 1982; Gottlieb, 1981; Barrera, 1986; Israll, 1982, 1985). Thus self-efficacy is postulated to be directly affected by social support.

Social Support

Social support from familial or friendship networks can affect preventive health behavior both directly and indirectly. Social support can include material assistance to eliminate barriers to health care and, as mentioned previously, provide emotional support in the form of encouragement and feedback to correct inappropriate behavior (Gottlieb, 1981; Barrera, 1986; Israel, 1982; and Cassel, 1976). Research shows that positive social support provides emotional support, (Lewis, 1966), referrals and information (MacKinlay, 1973 and Granovetter, 1976), a context for learning effective coping strategies (Bloom, et al., 1978; Hubbard, et al., 1984), and feedback to correct inappropriate actions (Cassel, 1976). Bloom et al. (1984) documents the relationship of social support from the immediate kinship and friendship network(s) as predictive of adjustment to postoperative status and compliance to later treatment. Heinzelman and Bagley (1970) found that a wife's support of preventive health programs for heart disease predicted the husband's level of compliance to a special health activity program. Diamond, Weiss and Grynbaum (1968) report that the family's support of rehabilitation is the most important factor in determining the patient's participation in spinal cord rehabilitation and compliance with physical therapy. It is not known from these studies, however, if social support from the husband to the wife is present or effective, hence, the need to focus on women as recipients of social support. These studies also do not address the function of self-efficacy as a mediator between the social support system and the individual's health behavior. Thus, examination of the function of social support in women's preventive health behavior must examine how social support is mediated by self-efficacy.

Social support is not unequivocally positive. More recent research shows that social support has costs as well as benefits, Tilden and Gaylen (1987) cite evidence from a variety of studies that document the negative effects of certain support functions on health outcomes. Many of the negative effects stem from the reciprocal obligations that ensue from receiving social support, which are perceived as a cost (e.g., guilt). Another negative effect can be the perception that one's privacy is invaded once another person in the support network has helped the individual at an emotional level. The need for adequate personal space appears to apply cross-culturally. In their study of the support functions of Mexican American families, Keefe, et al. (1979) found some respondents who reported avoiding seeking emotional support in order to prevent invasion of privacy. Another problem with postulating a relationship between social support and health behavior is the lack of consensus regarding the definition and measurement of social support.

Utilization Barriers

Motivation to engage in preventive behavior can be lessened by utilization barriers that impede action. These structural barriers can consist of tangible obstacles to access, lack of material resources (Bandura, 1977, 1982a), lack of knowledge of available care, rude or discourteous treatment from health care professionals, and lack of social reinforcement. Any of these factors can constrain action.

There can be a number of specific utilization barriers that minimize an effective cognition-action linkage for Hispanics. Utilization barriers are obstacles to health care access, in contrast to cognitions or attitudes that one might hold toward the health care system or to a specific treatment. Several possible barriers are the cost of preventive care, lack of transportation or childcare, and lack of Spanish-speaking staff (Marin, et al., 1983). Preliminary work being done by Estrada (1988)¹ clearly shows cost of care and ignorance of

where care is available to be the highest ranked barriers that prevent elderly Hispanics from getting needed care. However, over 20 percent of the elderly Hispanics having some form of health insurance reported having other barriers that prevented health care. These other barriers for elderly Hispanics consisted of transportation, childcare, and institutional obstacles such as inconvenient clinic hours, long waits in the office, and excessive lag time between calling for an appointment and actually seeing the doctor. For hypertensive and diabetic Hispanics, over 80 percent of those who reported one or more barriers to care also stated that these barriers prevented them from getting needed medical care. Clearly, those Hispanics most in need of care were not receiving medical attention, regardless of cognitive or behavioral factors that might impact preventive care. Estrada's work, however, does not make distinctions between men and women. For Hispanic low-income women, both racial and gender barriers may exist in the interaction between client and provider.

For example, Ward (1986) in her description of the history of public reproductive health care for low-income black women in Louisiana, cites numerous examples of rude and insensitive treatment given to women when seeking birth preventive care or prenatal and postnatal care. It was common practice to address women as "mother" when of childbearing age, and "aunt" when older. Little attention was given to explanation of treatment, nor to women's modesty and self-respect when under treatment. This low quality treatment eventually led to a movement to provide humane and accessible family planning for low-income women.

English-Language Proficiency and Cultural Assimilation

Cultural assimilation and English-language proficiency appear to have only weak effects on health care utilization among Hispanics. Several studies using English-language proficiency as a indicator of assimilation (Deyo, et al., 1985; Chesney, et al., 1982; Lopez-Aqueres, et al., 1984; and Markides, et al., 1985) found that when age, income, or education were controlled, cultural assimilation had negligible affects on health care behavior. Marks, et al. (1987) examined several indicators of cultural assimilation, using a multi-factor scale (Cuellar, et al., 1980) which includes English-language proficiency, food habits, friendship patterns, and frequency of listening to Mexican radio and TV. They found that cultural assimilation had only weak effects on the frequency of obtaining breast and cervical examinations among elderly Hispanic women. These researchers found that access to health care and availability of services were stronger determinants of Hispanic women's health behavior.

In essence, the literature substantiates that social support, self-efficacy and barriers to health care utilization are important and interrelated factors affecting preventive health care behavior. While English-language proficiency appears to have only weak direct effects on health care behavior, these studies have not examined the possible, mediating function of self-efficacy. Clearly, lack of proficiency in English may constitute a serious barrier to effective communication with the provider, a component of self-efficacy that is examined in this study. Without effective communication, other aspects of self-efficacy, such as perceived skill in performing BSE may also be affected. For women of color, rude behavior and damaging stereotypes among health care providers may exist as barriers to good health care. Finally, social support can function in a variety of ways to enhance self-efficacy and remove barriers to care. It can, however, have both negative and positive effects on efficacy and preventive health behavior.

METHODOLOGY

Sample characteristics

The sample used for analysis consisted of 106 Mexican American low-income women who attended a local health clinic serving primarily Mexican American clients. We had initially desired to do a random sample of Tucson Mexican American women between the ages of twenty-five and fifty, but time and financial constraints made the random sampling of such a select population prohibitive. Instead, we opted to extract a convenience sample of volunteers who were recruited for face-to-face interviews. A small portion of our sample consisted of women who were selected from references given to the interviewers, who pursued these women to get interviews. This method is a modified "snowballing" technique.

The women sampled were primarily of low-income status, as 39 percent earned less than \$10,000 per year, had large families, with an average of four children, and were primarily Spanish speaking (21 percent of the sample knew no English). Their average age was 42 years.

In use of breast self-examination or doctor examination, 62 percent reported they had a breast examination in the past year, 39 percent reported that they examine their own breasts at least once a month. In spite of reported high levels of BSE, few respondents could accurately describe how BSE was performed. Forty-six percent did not know any of the BSE positions, and only seven percent correctly identified all three positions. Over half of the sample could not describe any of the motions involved.² However, self-reporting verbal measures of proficiency should not be taken as definitive, as another study (Mamon and Zapka, 1985) has shown that verbal descriptions of the BSE process do not match proficiency of actual demonstration. In some cases, actual demonstration on breast models is more accurate than verbalization of such a skill.

Reported use of breast screening does not correspond with knowledge. Usage is amazingly high given the lack of accurate knowledge among this sample of women. Fifty-six percent did not know what a mammography was, 23 percent did not know any of the warning signs of breast cancer, and only one percent knew all of the warning signs of breast cancer. Almost the entire sample recognized lumps in the breast as a warning sign of breast cancer.

A word of caution is in order, as this sample consisted entirely of women who are users of the health care system and reported satisfaction with the care they were receiving. They are distinct from other Mexican American women who do not have access to health care. They are distinctly "compliers" and heavy users of the health care system and they report a relatively high level of satisfaction with the care they currently receive.

Measures of Variables

All variables in the model were measured using multi-item scales. Scales and subscales were developed using Alpha Cronbach reliability analysis and varimax rotated principal components analysis. Varimax rotated principal components analysis was used to determine if sub-dimensions of self-efficacy, social support, and barriers to access existed. Some items were dropped from the final scales (see, for example, Carmines & Zeller, 1982 and Nunnally, 1978): 1) original questionnaire items with extremely low variability were excluded (70 percent or more of the sample answering in one response category); 2) items loading on more than one factor were eliminated if the respective loadings were less than .20 in difference and over .30; and 3) items with no internal consistency as determined by coefficient Alpha. Scales were considered internally consistent if the standardized Alpha was greater than .65. If Cronbach alpha was sufficiently high to warrant combining items representing more than one underlying factor, one cumulative scale was constructed.

The questions used to assess social support, barriers to utilization, and self-efficacy were Likert items. Actual scale scores were created by adding the Likert scores of the original items.

Social Support -- Individuals were asked to rate support received from the five most important people in their lives, using a five- point Likert format. Scores were aggregated for the five network members on individual items before submitting items to Alpha reliability analysis and factor analysis. The final scale of social support consisted of nine items that assessed one's perception of the health-related emotional support received, such as feeling trust and understanding of feelings about health issues, and being able to count on significant others. A second aspect, referred to as material aid consisted of: provision of transportation when going to the doctor, helping with household chores and accompanying the subject when going to the doctor. Cronbach Alpha for the scale, combining items representing both underlying factors, was .94. The nine scale items and their respective item means, standard deviations, and factor loadings are in Table 1 (Appendix A).

Barriers to health care -- Barriers to health care were measured by a series of five items that tapped perceptions of the cost of care and inconvenience in getting appointments to see a doctor. Items assessed the degree to which long waits in the office, excessive lag time between making an appointment and actually seeing a doctor, having too many household chores, and cost were impediments to getting timely and good health care. Barriers to health care consisted of two underlying aspects: time constraints, and cost of care. The original questionnaire also asked respondents if they ever received rude or discourteous treatment. Since so few (less than two percent) reported ever having been rudely treated, this item was not included in the final scale. Cronbach Alpha for this scale was .65. Table 2 shows means and standard deviations, and factor loadings for each item in the final scale.

English-language proficiency -- English-language proficiency was used as an indicator of cultural assimilation. We originally requested information on the ethnicity of the five closest members of each subject's friendship network and self-reported ethnicity as well. However, in no case did fewer than 55 percent of the sample report friends outside of the Mexican American community nor did they report self-designations other than Mexican American. With a sample size of only 106, lack of variability rendered these measures of limited utility as indicators of cultural assimilation. English-language proficiency was measured by five items. The first four items elicited how well one could read books, write letters, understand conversations in English, and converse in English. Responses ranged from "not at all" to "very well" on a five-point Likert scale. The fifth item asked for language preference, with responses ranging from "Spanish only" to "English only" on a five-point scale. Cronbach Alpha for this scale was .95. Table 3 shows the items and their respective factor loadings, means, and standard deviations for component items.

Self-efficacy -- Self-efficacy was measured by 11 items that elicited self-perceptions of capacity to perform and teach BSE, to communicate effectively with a physician and to find ways to get access to health care. Cronbach Alpha for this scale was .82. Self-efficacy consisted of three aspects: skill specific efficacy, ability to break down barriers to care and communication skill with the provider. Table 4 shows means, standard deviations, and factor loadings for component items.

Breast self-examination -- The outcome variable was measured by a single item that asked the frequency of breast self-examination, ranging from once a month or more to "never." Mean and standard deviation for this item were 3.99 and 1.95 respectively. Table 5 shows the Cronbach Alpha, scale means and scale standard deviations for the scales of social support, efficacy, language proficiency and barriers to health care.

RESULTS

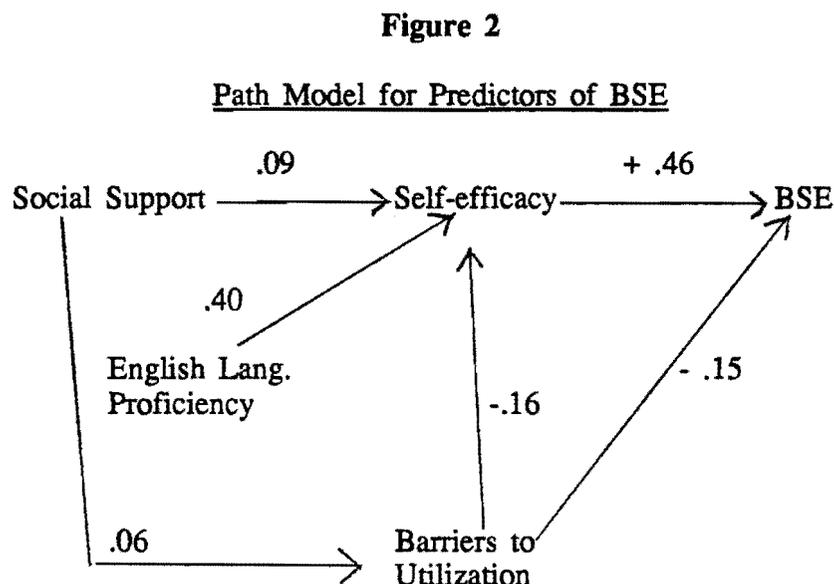
Bivariate correlations between frequency of BSE, self-efficacy, barriers to health care, language proficiency and social support showed a strong relationship between self-efficacy and the outcome of frequency of BSE. ($r=.47$; $p <.0001$). Table 6 shows these intercorrelations.

There was also a strong association between efficacy and English-language proficiency, as expected ($r=.34$; $p <.0004$). A weak relationship between barriers to health care and frequency of BSE was found ($r=-.17$; $p <.07$). No relationship was found between social support and self-efficacy. The relationship between social support and barriers to health care was also nonsignificant.³ Because social support can have either negative or positive effects, it was possible that the relationship between social support and self-efficacy was curvilinear, since support may reach a maximal level beyond which it becomes deleterious to one's efficacy. To test for this possible nonlinearity between social support and self-efficacy, social support scores were transformed into square roots, logs, and second and third powers. In no case was there a direct relationship between any numerical transformation of the social support scores and self-efficacy, ruling out further testing of the originally proposed model.

Interestingly, there was a positive relationship between English-language proficiency and barriers to care ($r=.19$; $p <.05$). While no linkage between these two variables was postulated in the model, it is perplexing that the relationship would be positive. Another interesting finding is the relationship between social support and English-language proficiency, where those who are more fluent in English perceive greater social support. This relationship, while not examined in the model, could be spurious and due to relationship between other unmeasured cultural assimilation variables. If a person is more assimilated, she may have more extensive extrafamilial ties that offer support.

Path Model

Because multicollinearity was ruled out based on the zero-order correlations, a multiple regression analysis was indicated to test the relationships among the predictor and dependent variables and to build the Path Model. Figure 2 shows the final Path model with respective betas (Asher 1983).⁴



The linkage between breast self-examination and self-efficacy was strong and in the expected direction (beta=.46). The linkage between barriers to utilization and breast self-examination was in the expected direction (beta=-.15), but weaker than the linkage between self-efficacy and breast self-examination. As expected, the linkage between English-language proficiency and self-efficacy was positive and strong (beta=.40), and the linkage between barriers to utilization and self-efficacy was negative and somewhat weaker (beta=-.16).

The linkage between social support and self-efficacy was non-significant (beta=-.09) as was the linkage between social support and barriers to utilization (beta=.06).

DISCUSSION AND CONCLUSION

The strong relationship between self-efficacy and breast self-examination supports its importance as a mediating behavioral variable between preventive self-care and social structural variables, such as barriers to care. The relationship of English-language proficiency and self-efficacy supports the function of self-efficacy as a mediator between cultural factors and health practices. The centrality of self-efficacy merits further exploration, as it may be the case that previous studies showing cultural variables as only weakly related to health behavior failed to take into effect one's cognitions as filters between the socio-cultural environment and health outcomes. A person who does not speak English will feel less efficacious, and will refrain from communicating with the health-care provider. However, if health care does not require the use of English or if the provider is culturally sensitive, cultural variables become less salient.

The multi-faceted nature of self-efficacy implies that, even if a woman does not speak English, she will feel efficacious in other realms of health care behavior, given proper guidance and training in a setting that is sensitive to her cultural needs. Given these circumstances, cultural variables will not affect health-care behavior. Furthermore, utilization barriers to health care can be softened by the presence of high self-efficacy. If one feels capable to interacting with the provider and implementing health care strategies, the environmental barriers to care may seem less ominous. However, at some point, such barriers to care could also lessen self-efficacy, especially if they consist of financial obstacles. No matter how efficacious one may feel, if he or she currently has no money to pay a physician, he or she will not seek health care.

The lack of relationship between social support and either efficacy or barriers to care may be due to the lack of correspondence between the specific skills required to perform BSE effectively and the type of support behaviors elicited in the original questionnaire items. Also, since the scale did not tap the negative aspects of social support, i.e., reciprocal obligations and stress stemming from these obligations, such unmeasured factors could have been affecting the relationship between social support, efficacy and the practice of BSE. Since breast self-examination requires a noticeable adjustment in behavior, the support network could in fact be invasive of the women's practice by offering unsolicited advice, criticism of her method, or other types of negative reinforcement that were not tapped in this study. Also, if one perceives that requests for aid in accessing health care require reciprocity, he or she may not activate the support network to remove barriers. Subsequent research focused on Mexican Americans and colon cancer prevention (Gonzalez, 1989a,b) will examine further the role of social support and how changes in dietary practices are sustained among married couples.

The weak relationship of barriers to care and self-efficacy, as well as breast self-examination may be due to the method of sampling employed in this exploratory study. If those who do not use any health care services were asked about issues such as barriers to health care and self-efficacy in dealing with new skills and communication with the provider, it is likely that much more variation would exist in the variables. Larger samples extracted by random selection would illuminate the variation that exists across social classes and would explore perceptions of barriers to care among those who do not use health care services consistently. Current research (Gonzalez, 1989a) testing the same hypotheses deals with Hispanic elderly and colon cancer prevention using non-health care settings to extract subjects

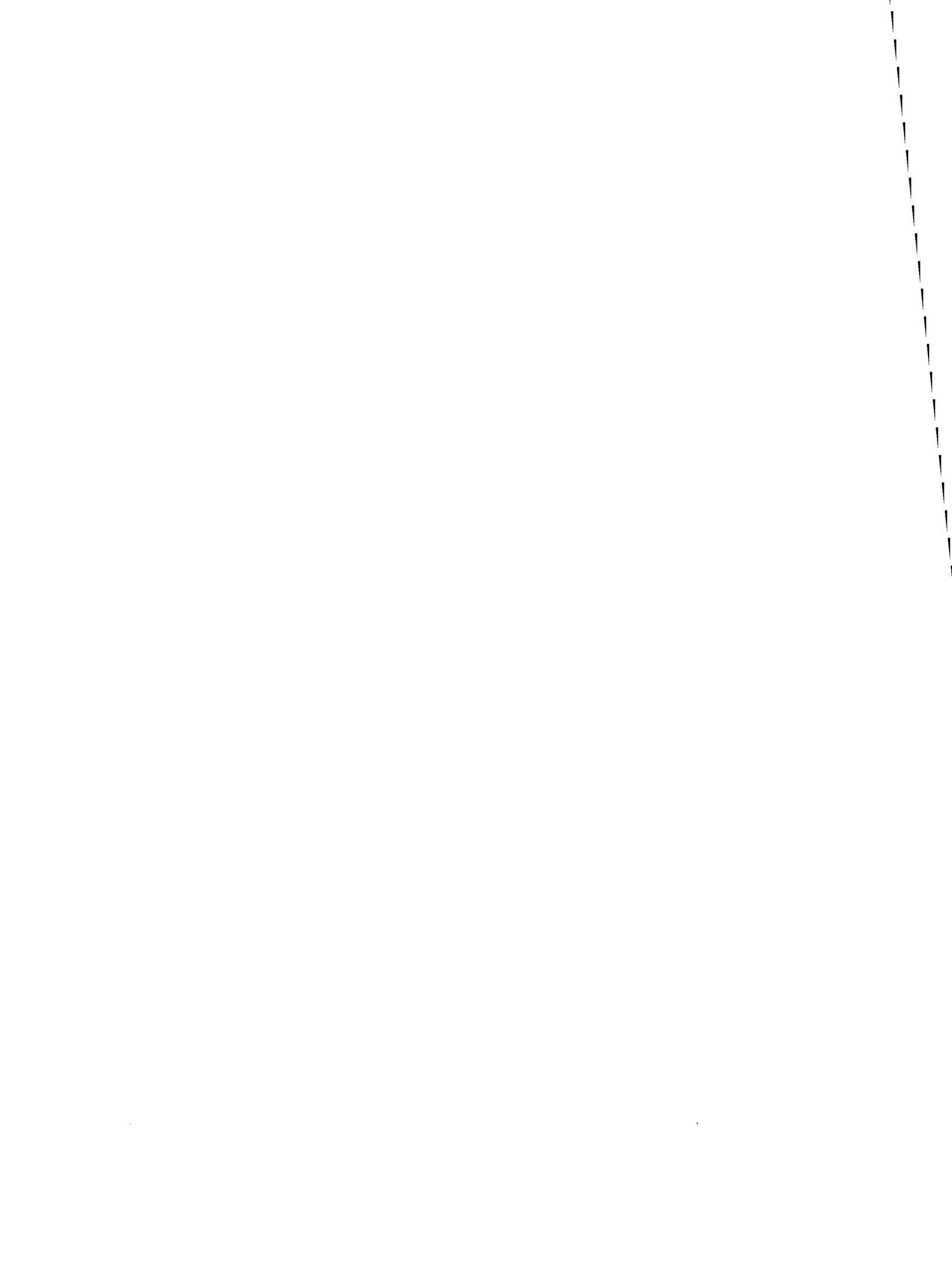
in an attempt to determine the extent to which barriers to care exist in this population. Long range research goals require a representative sample of Southwest Hispanics with equal emphasis on both men's and women's health behavior.

The negative relationship of barriers to health care and the practice of breast self-examination is a critical concern. While the relationship between barriers and BSE was weak in this sample, a representative sample including those who do not have access to regular preventive health care would be more revealing. Health care policy makers and providers must be made aware of how the lack of access to good health care adversely affects low-income women and women of color.

This research points to the serious need to provide adequate training and education to low-income and culturally distinct women. The seriousness of breast cancers among all women and delayed diagnosis among Hispanic women is an important public health focus for the 1990's.

ENDNOTES

1. Dr. Estrada of the Rural Health Office, University of Arizona is currently researching barriers to utilization of health care among elderly Hispanics (over 50). His data stems from the Hispanic Health and Nutrition Examination Survey conducted in the Southwest, New York City, and Miami during 1982-84. His analysis focuses on the Mexican American database, although data is now available for Puerto Ricans and Cubans.
2. While cervical cancer screening is not the subject of this paper, the study also examined attitudes toward screening. Many women, when asked about the purpose of the Pap Smear, used language that demonstrated little knowledge of the test. Others used language that showed embarrassment about their bodies. For example, women referred to the cervix and vaginal area as "down there," and the Pap Smear as "putting an iron rod in one side and the other."
3. Low intercorrelations among the predictor and dependent variables ruled out multicollinearity.
4. These betas are standardized as is customary practice when constructing path models (Asher, 1983).



BIBLIOGRAPHY

A study of Hispanics' attitudes concerning cancer and cancer prevention (1985, May). American Cancer Society. Unpublished document.

Anderson, B.G., Toledo, J.R., Hazam, N. (1982). An approach to the resolution of Mexican American resistance to diagnostic and remedial pediatric heart care. In J. Christlan and T.W. Maretzki (Eds.) Clinical Applied Anthropology, (pp. 325-350). D. Reidel Publishing Company.

Asher, H.B. (1983). Causal modeling. Sage University Paper Series in quantitative Applications in the Social Sciences, 07-003, Second edition.

Atwood, J.R. (1986). Conceptualization: concept development, the progress to quantification. Processing of the 3rd Annual Nursing Science Colloquium. 37-66, Boston, Boston University School of Nursing.

Bandura, A. (1982a). The self and mechanisms of agency. In Jerry Suls (Ed.) Psychological perspectives on the self. Lawrence Erlbaum Associates.

Bandura, Alfred (1982b). Self-efficacy mechanism in human agency. American Psychologist, 37(2), 122-147.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 84, 191-215.

Bandura, A., & Adams, N.E. (1977). Analysis of self-efficacy theory of behavioral change. Cognitive Therapy and Research, 1, 287-308.

Bandura, A., Reese, L., & Adams, N.E. (1982). Microanalysis of action and fear arousal as a function of differential levels of perceived self-efficacy. Journal of Personality and Social Psychology, 43(1), 5-21.

Bandura, A., Adams, N.E., & Beyer, J. (1977). Cognitive processes mediating behavioral change. Journal of Personality and Social Psychology, 35, 125-139.

Basch, C.E., Gold, R.F., McDermott, R.J., & Richardson, C.E. (1983). Confounding variables in the measurement of cancer patient compliance. Cancer Nursing, 6, 4, 285-293.

Becker, Marshall H., & Maiman, Lois A. (1975). Sociobehavioral determinants of compliance with health and medical care recommendations. Medical Care, 13(1), 10-24.

Becker, M.H., Drachman, R.H., & Kirscht, J.P. (1972). Motivations as predictors of health behavior. Health Services Rep., 87, 852-61.

- Becker, Marshall H., Maiman, L.A., Kirscht, J.P., Haefner, D.P., & Drachman, R.H. (1977a). The health belief model and prediction of dietary compliance: A field experiment. Journal of Health and Social Behavior, 18, 348-366.
- Belloc, Nedra B., & Breslow, Lester (1972). Relationship of physical health status and health practices. Preventive Medicine, 1, 409-421.
- Biran M., & Wilson, G.T. (1981). Cognitive versus behavioral methods in the treatment of phobic disorders: A self-efficacy analysis. Journal of Consulting and Clinical Psychology, 886-889.
- Bloom, J.R., Ross, R.D., & Burnell, G.M. (1978). Effect of social support on patient adjustment following surgery. Patient Counseling and Health Education, 1:50-59.
- Calnan, M.W., & Moss, S. (Eds.) (1984, July). The health belief model and compliance with education given at a class in breast self examination. Journal of Health and Social Behavior, 25, 198-210.
- Calnan, M.W., & Rutter, D.R. (1986). Do health beliefs predict health behavior? An analysis of breast self-Examination. Social Science in Medicine, 22, 6, 673-618.
- _____. (1988). Do health beliefs predict health behavior? A follow-up analysis of breast self-examination. Social Science in Medicine, 26, 4, 463-465.
- Casavantes, E. (Winter 1970). Pride and prejudice: A Mexican American dilemma. Civil Rights Digest, 3, 22-27.
- Castro, F.G., Furth, P., & Karlson, H. (1984). The health beliefs of Mexican, Mexican American and Anglo American women. Hispanic Journal of Behavioral Sciences, 6, 365, 383.
- Cassel, J. (1976). The contribution of the social environment to host resistance. American Journal of Epidemiology 104:107-123.
- Chesney, A.P., Chavira, J.A., Hall, R.P., & Gary, H.E. (1982) Barriers to medical care of Mexican Americans: The role of social class, acculturation, and social isolation. Medical Care, 20, 883-891.
- Chambliss, C.A., & Murray, E.J. (1979). Efficacy attribution, locus of control and weight loss. Cognitive Therapy and Research, 3(4), 349-353.
- Clark, Martire, & Bartolomeo, Inc. (1985, May). A study of Hispanics' attitudes concerning cancer and cancer prevention. Unpublished report commissioned by the American Cancer Society.
- Conditte, M.M., & Liechtenstein E. (1981). Self-efficacy and relapse in smoking cessation programs. Journal of Consulting Psychology, 49, 648-658.

Copeland, D.R., Silberberg, Y., & Pfefferbaum, B. (Spring 1983). Attitudes and practices of families of children in treatment for cancer: A cross-cultural study. American Journal of Pediatric Hematology and Oncology, 5,(1), 65-71.

Cummings, K.M., Becker, M.H. & Maile, M.C. (1980), Bringing the models together: An empirical approach to combining variables used to explain health actions. Journal of Behavioral Medicine, 3(2), 123-145.

Daly, M.B., Clark, G.M., & McGuire, W.L. (1985, April). Breast cancer prognosis in a mixed Caucasian-Hispanic population: 1971-1982 study data. Journal of the National Cancer Institute, 74(4), 753-757.

Deyo, R.A., Diehl, A.K., Hazuda, H. & Stern, M.P. (1985). A simple language-based acculturation scale for Mexican Americans: Validation and application to health care research. American Journal of Public Health, 75, 51-55.

Diamond, M.D., Weiss, A.J., & Grynbaum, B. (1968). The unmotivated patient. Archives of Physical Medicine and Rehabilitation, 49, 281-284.

DiMatteo, M. Robin, & DiNicola, D. Dante (1982). Achieving patient compliance: the psychology of the medical practitioner's role. New York: Pergamon Press.

Eraker, S.A., Kirscht, J.P., & Becker, M.H. (1984). Understanding and improving patient compliance. Annals of Internal Medicine, 100, 258-268.

Estrada, T. (1987, May). Barriers to utilization among Mexican Americans: Evidence from HHANES. Unpublished paper presented at the Arizona/Chicano Conference.

Evans, R.I., Rozelle, R.M., Lasater, T.M., Oembroski, T.M. and Allen, B.P. (1970). Fear arousal, persuasion, and actual versus implied behavioral change. J. Personality and Soc. Psychol., 16, 220-227.

Feltz, D.L., Landers, D.M., & Raeder, V. (1979). Enhancing self-efficacy in high-avoidance motor tasks: A comparison of modeling technique. Journal of Sport Psychology, 1, 112-122.

Francis, V., Korsch, B.M., & Morris, M.J. (1969). Gaps in doctor-patient communication. New England Journal of Medicine, 280, 535-40.

Garza, R.T., & Ames, R.E. (1976). A comparison of Chicanos and Anglos on locus of control. In C.A. Hernandez, M.J. Haug, and N.N. Wagner (Eds.) Chicanos: Social and psychological perspectives. (2nd Ed.). C.V. Mosby.

Gilchrist, L.D., & Schinke, S.P. (1983). Coping with contraception: Cognitive and behavioral methods with adolescents. Cognitive Therapy and Research, 7,(5), 379-388.

Gonzalez, J. (1989a). Hispanic Elderly and Colon Cancer Prevention. Grant funded by the National Cancer Institute., Baltimore, MD. 3POI-

- Gonzalez, J. (1989b). Mexican American Married Couples and Dietary Practices. Faculty Affirmative Action grant funded by California State University, Fresno, CA.
- Gottlieb, B.H. (1981). Social networks and social support in community mental health. In B.H. Gottlieb (Ed.) Social networks and social support. Beverly Hills: Sage Publications.
- Grady, K.E., Kegeles, S.S., Lund, A.K., Wolk, C.H., & Farber, N. J. (Summer 1983). Who volunteers for a breast self-examination? Evaluating the bases for self-selection. Health Education Quarterly, 10,(2), 79-94.
- Granovetter, M.S. (1976). The strength of weak ties. American Journal of Sociology, 78: 1360-1380.
- Haefner, D.P., & Kirscht, J.P. (1970). Motivational and behavioral effects of modifying health beliefs. Public Health Reports, 85, 478-84.
- Haefner, D.P., Kegeles, S.S., Kirscht, J., & Rosenstock, I.M. (1967, May). Preventive actions of dental disease, tuberculosis, and cancer. Public Health Reports, 82(5), 451-459.
- Heinzelmann, Fred & Bagley, Richard W. (1970). Response to physical activity programs and their effects on health behavior. Public Health Reports, 85(10), 905-911.
- Hershey, J.C., Morton, B.G., Davis, J.B., & Reichgott, M.J. (1980). Patient compliance with antihypertensive medication. American Journal of Public Health, 70, 10, 1081-1089.
- Hindi-Alexander, & Throm, (1987). Compliance or non-compliance: That is the question! American Journal of Health Promotion. 1, (4):5-11.
- Hochbaum, G.M. (1958). Public participation in Medical screening programs: A Social psychological study. Public Health Service, Public Health Service Publication No. 572, Washington, United States Government Printing Office.
- Hubbard, P. , Muhlenkamp, A.F., & Brown, N. (1984, October). The relationship between social support and self-care practices. Nursing Research, 33(5), 266-270.
- Israel, B.A. (1982). Social networks and health status: Linking theory, research and practice. Patient Counseling and Health Education, 4, 65-79.
- Janz, N.K., & Becker, M. (1984). The health belief model: A decade later. Health Education quarterly, 11, 1-47.
- Jessor, R., Graves, D.T., Hanson, R.C., & Jessor, S.L. (1968). Society, personality, and deviant behavior. New York: Holt, Rinehart & Winston.
- Joreskog, K., & Sorbom, D. (1986). LISREL VI Scientific Software, Inc.

- Kasl, S.V., & Cobb, S. (1986, February). Health behavior, illness behavior and sick role behavior. Archives of Environmental Health I 12, 246-266 and II (1966, April). 12, 534-541.
- Keefe, S., Padilla, A., & Carlos, M. (1979). The Mexican American family as an emotional support system. Human Organization, 38, 3, Summer, 144-152.
- Kegeles, S.S. (1963). Some motives for seeking preventive dental care. Journal of the American Dental Association, 67, 90-98.
- Kegeles, S.S., & Grady, K.E. (1982). Behavioral dimensions. In D. Schottenfeld & J. Fraumini, J. (Eds.) Cancer epidemiology and prevention, (pp. 1049-1063). Philadelphia: W.B, Saunders Company.
- Kirscht, J.P. & Rosenstock, I.M (1977). Patient adherence to antihypertensive medical regimens. Journal of Community Health, 3: 115-124.
- Kluckhohn, F.R., & Strodtbeck, F.L. (1961). Variations in Value Orientation. Westport, CT: Greenwood Press.
- Lau, R.R. (1982). Origins of health locus of control beliefs. Journal of Personality and Social Psychology, 42 (2):322-334.
- Lopez-Aqueres, W., Kemp, B., Staples, F., & Brummel-Smith, K. (1984). Use of health care services by older Hispanics. Journal of American Geriatrics Society, 32: 435-440.
- Mack, T.M., Walker, Ann; Mack, Wendy, & Bernstein, Leslie (1985). Cancer in Hispanics in Los Angeles County. National Cancer Institute Monograph 69, 99-104.
- Macrae, F.A., Hill, D.J., St. John, K.J.B., Ambikapathy, A., Garner, J.R., & the Ballarat General Practitioner Research Group (1984). Predicting colon cancer Screening behavior from health beliefs. Preventive Medicine, 13, 115-126.
- Maiman, L.A., Becker, M.H., Kirscht, J.P., Haefner, D.P., & Drachman, R.H. (1977). Scales for measuring health belief model dimensions: A test of predictive value, internal consistency, and relationships among beliefs. Health Education Monographs, 5(3), 215-230.
- Marin, B.V.O., Marin, G., Padilla, A., & de la Rocha, C. (1983). Utilization of traditional and non-traditional sources of health care among Hispanics. Hispanic Journal Behavioral Sciences, 5, 1, 65-80.
- Markides, K.S., Levin, J.S., Ray, L.A. (1985). Determinants of physician utilization among Mexican Americans: A three- generation study. Medical Care, 23: 236-246.
- Marks, G., Solis, J., Richardson, J.L., Collins, L.M., Birba, L., & Hisserich, J.C. Health behavior of elderly Hispanic women: Does cultural assimilation make a difference. American Journal of Public Health, 77(10), 1315-1319.

- Marsh, W.W., & Perlman, L.V. (1972). Understanding congestive heart failure and self-administration of digoxin. Geriatrics, 27, 65-70.
- McKinlay, J.B. (1972). Some approaches and problems in the study of the use of services: An overview. Journal of Health and Social Behavior, 13, 115-152.
- McKinlay, J.B. (1973). Social networks, law consultation, and help-seeking behavior. Social Forces, 51, 275-295.
- Mirowsky, J., & Ross, C.E. Mexican culture and its emotional contradictions. (1984, March). Journal of Health and Social Behavior, 25, 2-13.
- Montano, D.E. (1983). Compliance with health care recommendations: A reassessment of the health belief model. Dissertation Abstracts International, 44(4-B), 1281-1282.
- Murdaugh, Carolyn L. (1982). Instrument development in preventive behaviors for CAD. Dissertation Abstracts International, 43(3), 680b.
- Neely, E., & Patrick M.L. (1968). Problems of aged persons taking medications at home. Nursing Research, 17, 52-55.
- O'Leary, A. (1985). Self-efficacy and health. Behavioral Research and Therapy, 23(4), 437-451.
- Pender, N.J. (1987). Health promotion in nursing practice. Connecticut: Appleton-Century-Croft.
- Proceedings Summary of the Hispanic Cancer Control Program Workshop, National Cancer Institute, Division of Cancer Prevention and Control. (April 17-18, 1986).
- Richardson, J.L., Marks, G., Solis, J.M., Collins, L.M., Birba, L., & Hisserich, J.C. (1987). Frequency and adequacy of breast cancer screening among elderly Hispanic women. Preventive Medicine, 16, 761-774.
- Rosenstock, I.M. (1974). Historical origins of health belief model. Health Education Monographs, 2(4), 328-335.
- Rotter, Julian B. (1954). Social learning and clinical psychology. New York: Prentice-Hall.
- Sackett, David L. & Haynes, R. Brian. (1976). Compliance with therapeutic regimens. Baltimore: The John Hopkins University Press.
- Samet, Jonathan M., Rey, Charles R., Hunt, William C., & Goodwin, James S. (1987, September). Survival of American Indian and Hispanic cancer patients in New Mexico and Arizona, 1969-82. Journal of the National Cancer Institute, 79(3), 457-463.

Savitz, D. (1986, October). Changes in Spanish surname cancer rates relative other whites, Denver area, 1969-1471 to 1979- 81. American Journal of Public Health, 79(10), 1210-1215.

Simon, K.M. (1979). Self-evaluative reactions: The role of personal validation of the activity. Cognitive Therapy and Research, 3(1A), 111-116.

Solis, Julie, Richardson, J., & Hisserich, J.C. et al. (1985, November). Cancer screening among elderly hispanic women. Paper presented at the Second International Conference on Cancer.

Suchman, E.A. (1967) Preventive health behavior: A model for research in community health campaigns. J. Health Soc. Behav., 8, 197-209.

Tilden, V.P. & Gaylan, R.D. (1987). Cost and conflict: The darker side of social support. Western Journal of Nursing Research, 9, 1:9-18.

Watkins, J.D., Williams, T.F., Martin, D.A., Hogan, M.D., & Anderson, E. (1967) A study of diabetic patients at home. American Journal of Public Health, 57, 452-59.

Watts, R.J. (1982). Sexual functioning, health beliefs, and compliance with high blood pressure medications. Nursing Research, 31, 5, 178-183.

TABLE 1
Social Support Scale
Item Means, Standard Deviations, and Factor Loading^a

Item	Emot. Support	Material Support	M	Std. dev
1. Person helps you feel good about yourself	.89	---	23	6.3
2. Trust between you and this person	.88	---	23	5.9
3. Count on person to understand your feelings	.82	---	23	5.9
4. Count on person to be there for you no matter what	.80	---	23	6.2
5. Count on person to loan your money or drive you somewhere if needed	.74	---	22	7.1
6. How often does this person go with you to the doctor?	---	.79	14	6.9
7. How often does this person inquire about you visit with the doctor?	---	.79	20	7.4
8. How often does this person provide transportation when needed to go to the doctor?	---	.78	17	7.4

^aMeans are rounded off to the nearest whole number; standard deviations are rounded off to the nearest tenth, and factor loadings of .30 or less are noted with a dashed line.

TABLE 1 (cont.)

**Social Support Scale
Item Means, Standard Deviations, and Factor Loadings**

Item	Emot. Support	Material Support	M	Std. dev
9. How often does this person do housework or errands for you when you need to go to the doctor?	---	.75	13	7.8
Eigen value	3.8	2.2		
Percent variance explained by each factor	42.5	24.5		
Total variance explained by both factors	67%			

TABLE 2**Barriers to Health Care Scale^b**

Item	Time factor	Cost factor	M	Std. dev.
1. It takes a long time to get an appointment	.67	---	2.1	1.2
2. The waiting time is too long in the office	.79	---	2.4	1.3
3. You have too many house chores to do.	.78	---	2.0	1.3
4. The doctor's fees are too high	---	.89	2.0	1.3
5. The doctor expects full pay after each visit	---	.89	1.7	1.2
Eigen values	2.1	1.3		
Percent variance explained by each factor	42	26		
Total variance explained by both factors combined		68%		

^bMeans are rounded off to the nearest tenth

TABLE 3
Self-Efficacy Scale

Item Means, Standard Deviations, and Factor Loadings^a

1.	How certain are you that you can do a breast self examination without anyone's help?			
Mean	Std.dev.	Perform. Skill factor	Comm. Skill	Barrier breakdown
4.05	1.37	.88	---	---
2.	How certain are you that you can find a lump on your breast when you do the breast self-examination without help?			
Mean	Std.dev.	Perform. Skill	Comm. Skill	Barrier Breakdown Skill
3.83	1.30	.85	---	---
3.	How certain are you that you can teach another woman how to examine her breasts?			
Mean	Std.dev.	Perform. Skill factor	Comm. Skill	Barrier Breakdown Skill
3.49	1.44	.79	---	---
4.	How certain are you that you can ask the doctor the necessary questions to get the information that you need about your health condition?			
Mean	Std.dev.	Perform. Skill	Comm. Skill	Barrier Breakdown Skill
4.28	1.09	---	.73	---

^aFactor loadings are all under .30 in the blank columns, therefore, they are not reported.

TABLE 3 (Cont.)

5.	How certain are you that you can understand the doctor's explanation about your health condition?			
Mean	Std.dev.	Peform. Skill	Comm. Skill	Barrier Breakdown Skill
4.25	1.11	---	.72	---
6.	How certain are you that you can understand what the doctor is doing when he/she examines you?			
Mean	Std.dev.	Perform. Skill	Comm. Skill	Barrier Breakdown Skill
4.22	1.07	---	.72	---
7.	Sometimes it is necessary to explain to our friends and family the results of a pap smear. How certain are you that you can explain the results to another person?			
Mean	Std.dev.	Perform. Skill	Comm. Skill	Barrier Breakdown Skill
3.91	1.27	---	.58	---
8.	If needed, how certain are you that you can get someone to help you with child care so that you can get to the doctor?			
Mean	Std.dev.	Perform. Skill	Comm. Skill	Barrier Breakdown Skill
4.60	1.39	---	---	.78

TABLE 3 (Cont.)

9.	How certain are you that you can keep your next appointment with the doctor?			
Mean	Std.dev.	Perform. Skill	Comm. Skill	Barrier Breakdown Skill
4.49	0.94	---	---	.68
10.	How certain are you that you can do what the doctor recommends for required follow-up care?			
Mean	Std.dev.	Perform. Skill	Comm. Skill	Barrier Breakdown Skill
4.30	1.10	---	---	.68
11.	If needed how certain are you that you can get a friend or family member to give you a ride to the clinic?			
Mean	Std.dev.	Perform. Skill	Comm. Skill	Barrier Breakdown Skill
4.32	1.17	---	---	.66
Eigen value	4.18	1.83	1.21	
% variance explained		35%	15%	10%
Total variance explained		60%		

TABLE 4**Mean Scale Values and Cronback Alpha Coefficients
for Predictor and Dependent Variables**

Scale	Gronback Alpha	Mean	Standard Deviation
Social support	.95	178.7	48.9
Barriers to health care	.65	10.1	4.0
Efficacy	.80	45.2	8.7

Table 5**Correlation Matrix of Predictor and Dependent Variables**

	Efficacy	Social Support	Barriers to health care	Frequency of BSE
Efficacy	---	.00	-.08	.48***
Social support		---	.06	-.01
Barriers to health care			---	-.18*
Frequency of BSE				---

* p < .07

*** p < .0001

TABLE 6

**Multiple Regression Analysis: Self-Efficacy and
Barriers to Health Care as Predictors of BSE**

Step 1 -- Efficacy

R-Square= .23	Analysis of Variance	F=29.52	p <.0001
B= .11	Beta = .48	Std.error=.020	

Step 2 -- Barriers to Health Care

R-Square= .25	Analysis of Variance	F=16.3	p <.0001
B= -.06	Beta=-.14	Std.error=.043	

R-Square change=.02 F=2.56 (ns r-square change)

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