

1-1-1996

Psychosocial and Cultural Differences in Latino Americans on Hemodialysis

Laura Greenwald

Follow this and additional works at: <http://preserve.lehigh.edu/cas-campbell-prize>



Part of the [Psychology Commons](#)

Recommended Citation

Greenwald, Laura, "Psychosocial and Cultural Differences in Latino Americans on Hemodialysis" (1996). *Donald T. Campbell Social Science Research Prize*. Paper 34.

<http://preserve.lehigh.edu/cas-campbell-prize/34>

This Article is brought to you for free and open access by the College of Arts and Sciences at Lehigh Preserve. It has been accepted for inclusion in Donald T. Campbell Social Science Research Prize by an authorized administrator of Lehigh Preserve. For more information, please contact preserve@lehigh.edu.

To be submitted for the Campbell Prizes

Recommended by Dr. Diane Hyland, Psychology

**Psychosocial and Cultural Differences in Latino Americans
on Hemodialysis**

Laura Greenwald

Lehigh University

4/15/96

The Latino community in the United States is expanding rapidly. From 1980 to 1988 the Latino population increased by 34%, compared to an increase of 7% for the overall US population (Bureau of the Census, 1988). Today, some 22.4 million Latino Americans reside in the United States. The Urban Institute predicts that by the year 2010, there will be 39 million. Latino Americans will comprise 12.9% of the total population and form the largest minority group in the nation (Exter, 1993). Those aged 35 and older will exhibit the fastest growth rate. As the population increases, so does the need for medical care. However, there is little in the literature regarding health and patient education efforts with Latinos. The limited information available indicates that too many of them are not receiving the kinds of services they need and want. In fact, research trends show that Latinos tend to delay preventive care, resulting in higher morbidity and mortality rates for diseases such as cancer (Gonzalez et al., 1990). Through the process of acculturation, the prevalence of diseases such as hypertension have increased and become a major threat to the Latino community (Cangiano, 1994). The reasons why Latinos underutilize health care in the United States are of great interest to researchers. Demographic variables, psychosocial variables, differences in medical beliefs, and language barriers affect people's decisions to seek professional help. The challenge is to target specific causes and determine why Latinos are not receiving proper health care.

In their study on traditional and nontraditional sources of health care among Mexican Americans, Marin et al.,(1982) suggested the reasons why they underutilized most sources of

medical care and were not seeking enough preventive care. The top two reasons were the high cost of health services and lack of medical insurance, followed by undocumented status, lack of child care, and difficulty speaking English. Later, Westburg (1989) concluded that the major factor affecting the care of many Latinos is economic disadvantage. In 1988, more than two and a half times as many Latino families (25.8%) were below the poverty level, as compared with families in the rest of the population (9.7%). Finally, the "working poor" Latinos were not eligible for governmental programs and became progressively less able to afford the rising cost of medical services (Westburg, 1989). Additional survey data indicated that cost was the main reason why elderly Mexican Americans in East Los Angeles did not seek the care they needed (Marin et al., 1982).

Culture affects every aspect of an individual's life. While economic factors are critical in determining one's access to health care, psychosocial factors influenced by culture are important as well. Research suggests that Latinos share characteristics, in varying degrees, that may interfere with their search for medical help, therapy, and health education. For example, Poma (1983) supported that the language barrier for Spanish speaking Latinos may cause difficulties in understanding treatment. In this study, Latino patients' discussions were videotaped. Poma reported a low recall by patients of specific information given to them before surgery. Poma (1983) concluded that while Latinos apparently accept what a health care worker is saying through nodding and other affirmative expressions, they may not necessarily understand the information. Sometimes when one does not understand, it is easy to simply say "yes." In summary, a physician's assumption that the patient is listening and following the conversation greatly affects the nature of the physician-patient communication. When discussing problems,

advising about therapeutic alternatives, and educating patients about their medical condition, physicians usually present information that is new to patients. Even among persons who speak the same language, comprehending medical material may be challenging.

Cultural beliefs also affect doctor-patient relationships. Traditionally among Latinos, the preferred relationship is authoritarian (Ruiz, 1983). They rather assume that the doctor will do what is best for them. Physicians who do not display confidence and firmness in making medical decisions and recommending treatment may be perceived as weak by Latinos; this decrease in expectation may lead to frustration and poor treatment compliance. Treatment regimens suggested by a doctor who does not portray him/herself as an authority figure may not be taken seriously.

An important factor in determining one's medical care practices is the role of health locus of control. Health locus of control refers to the beliefs people have about the control of their health status. Some people feel that they are in complete control of their health and maintain strong internal beliefs about their condition. Others credit their health condition to powerful others such as doctors, and some people believe that their health is due to chance. Researchers (Mirowski & Ross, 1984) contended that Mexican Americans are more likely than Euro-Americans to believe in chance or external control controlled with regard to health. Latinos may be less internally controlled with regard to health, however it is difficult to generalize across the culture. Health locus of control and education have been used to predict treatment compliance in patients in the general population with illnesses such as tuberculosis, diabetes and hypertension. In general, one's perception as emanating from internal sources has been shown to relate positively to treatment compliance. Ferraro's study (1987) of 150 adult diabetics concluded that

college educated diabetics were more internal in their locus of control orientation. In their study of 318 hypertensive patients, Lewis et al., (1978) found that the more internally oriented the patient, the greater the level of compliance behavior.

Depression is a psychosocial problem among patients with end-stage renal disease on hemodialysis. Approximately 25% of dialysis patients in the general population are depressed at any one time, and 1% will commit suicide (Stewart, 1983). Depression is often associated with poor treatment compliance. Mirowski and Ross (1984) also suggest that for the Latino culture, an external locus of control is followed by higher levels of depression. However, these authors assumed that the Latino culture alone, excluding factors such as education and life experiences, was responsible for external control. Research on the association between health locus of control and depression has produced contradictory findings. In Holman's study (1991) of dialysis patients in the general population, the belief that one's health was internally controllable was associated with less depression among subjects who had not previously experienced a failed renal transplant. This belief was associated with greater depression for subjects who had returned to dialysis following an unsuccessful transplant. These contradictory findings reflect contextual variables in relation to health locus of control and depression, but cultural variables need to be considered as well.

In conditions such as chronic hemodialysis, specific psychological factors such as low frustration tolerance are the most frequent for noncompliance with medical recommendations (Goldstein & Fenster 1973). An average of 44% of hemodialysis patients in the general population are noncompliant with some aspect of their treatment regimen (Agashua et al. 1981). Considering the frustration that the language barrier can cause, along with psychosocial variables

such as differences in health care beliefs, the study of Latino hemodialysis patients may be helpful in understanding cultural differences and predictors of compliance. Unfortunately, the number of Latino Americans treated for end-stage renal disease can not be confirmed due to the unavailability of data on ethnicity in the United States Renal Data System (Radecki & Nissenson 1994). However, Latino Americans are three times as likely to contract diabetes mellitus, a major cause of end stage renal disease and have a higher overall incidence of kidney failure than Euro-Americans (Randall, 1991).

As stated earlier, Latinos are underutilizing health care in the United States. Lack of financial support, differences in health care beliefs concerning locus of control and perceptions of physician-patient relationships, and a language barrier may affect how Latinos comply with their treatment regimens. First, we must examine whether or not Latinos hemodialysis patients are complying to treatment. Once the degree of their compliance is analyzed, we may determine some predictors of compliance.

The following research intends to measure how well Latino American hemodialysis patients, compared to non-Latino patients, are adhering to their treatment schedules. It also aims to reveal cultural and psychosocial differences between Latino and non-Latino American hemodialysis patients which influence their treatment. Compliance will be assessed through interdialytic weight gain and three biochemical indices of dietary compliance. Psychosocial factors which will be examined are health locus of control, English communication ability, depressive symptomatology and patient education. We predict that Latino American hemodialysis patients are not complying as well to their treatment regimens as non-Latino patients due to cultural differences. We also predict that Latino American hemodialysis patients are less educated

about their disease than non-Latinos, more depressed and more likely to believe in an external health locus of control. Our hypothesis is that the language barrier for Latino Americans and an external health locus of control lead to poorer treatment compliance and depression. We will examine whether or not these psychosocial and cultural factors are indicators of compliance.

Method

Participants

Fifteen Latino and 16 non-Latino American hemodialysis patients were recruited from 2 outpatient hemodialysis centers. To be included as a subject in this study, patients did not exhibit any cognitive or speech deficits that would make it difficult to complete an interview. Patients were adults (age 18 or older) and either Spanish or English speaking or bilingual. The non-Latino subjects were included in this investigation to serve as a comparison group.

Measures

Demographic Measures

Age, occupation, language spoken most frequently, and highest level of education completed were determined for each patient.

Psychosocial Measures

Initially, we asked the Latino American patients a few questions about how well they perceive their English communication abilities and whether or not they clearly understand what their doctors say when they engage in conversations. We also determined both Latino and non-

Latino patients' general health locus of control by asking them how important the role is that they play, their doctors' play and fate plays in making sure they stay as healthy as possible.

The CES-D is a 20 item questionnaire designed to identify the presence of depressive symptomatology among the general population (Radloff, 1977). The scale was designed to reflect the current state and to be responsive to changes in state, by asking how often symptoms occurred during the past week. The severity, or persistence of each symptom, including depressed mood, feeling of guilt and worthlessness, feelings of helplessness and hopelessness, psychomotor retardation, loss of appetite and sleep disturbance, is rated from zero to three depending on it's frequency. Zero means the symptom did not occur at all, one means it occurred one or two times, two means it occurred two or three times, and three means it occurred five times or more during the past week. The traditional cutoff for identifying high symptom levels is 16 or above.

The CES-D scale has been translated into a number of languages, including Spanish. It is widely used, has good internal consistency and reliability ($\alpha=.87$) and is considered a valid measure of depressive symptomatology (Weissman et al., 1977, Moscicki et al., 1989).

In order to measure patients' education or knowledge of their disease, we used a modification of the Kidney Disease Questionnaire (KDQ) designed by Devins et al. (1990). The purpose in developing this questionnaire was to investigate the adaptive value of end-stage renal disease (ESRD) knowledge as a contributor to psychosocial and physical well being. The questionnaire was proven to be reliable ($\alpha=.75$) and valid. Internal consistency reliability was calculated through Cronbach's coefficient alpha (.95). These results provided evidence that the KDQ provides a useful and psychometrically sound means of assessing ESRD-related knowledge.

Objective Measures

Blood samples for three biochemical indices of dietary compliance, serum potassium (K) serum phosphorous (P) and blood urea nitrogen (BUN) are routinely collected on a monthly basis from hemodialysis patients. Upper limits for potassium and compliance reported in the literature vary from 5.0 to 6.0 mEq/L. Criteria for defining phosphorous compliance range from 2.5-4.5 mg/dl. Acceptable values for BUN compliance is 100 mg/dL (Lamping, 1990, Hitchcock, 1992). Biochemical measures were obtained on the basis of four monthly medical reports. Interdialytic weight gain was also assessed for a period of two months. Weight gain up to 3.5 kg between dialysis sessions falls within compliance criteria (Lamping, 1990).

Procedure

Subjects were interviewed during a regularly scheduled dialysis session at their outpatient clinic. Latino American subjects had the option of having the interview conducted in Spanish or English, but everyone felt more comfortable conversing in Spanish. The patient interview included dialysis history, the CES-D depression scale, health locus of control and English communicability questions and the Kidney Disease Questionnaire. We obtained the laboratory values of dietary measures and demographic data from the patients' medical records.

Results

The majority of the Latino American subjects were born in Puerto Rico. Twelve were educated through elementary school and 3 went to high school. Two of the subjects graduated with a high school diploma.

Forty percent (n=6) of the subjects had difficulty understanding their doctors most of the time

due to difficulties understanding English. Eighty percent (n=12) of all the Latino Americans said that translators were never available to facilitate communication between them and their doctors.

No significant differences were found in the compliance rates between Latino and non-Latino American patients. However, significant differences were reported on the kidney disease questionnaire, the depression scale and health locus of control. After performing a *t* test for equality of the means, we found that Latinos' scores on the kidney disease questionnaire were significantly lower than non-Latinos' scores ($t=-3.8$, $p<.001$). Latino American patients answered more questions incorrectly.

The results from the CES-D depression scale indicated that Latino American hemodialysis patients are at severe risk. Where scores above 16 signify clinical depression, the mean score for Latinos was 21.8 compared to 12.3 for non-Latinos. A *t* test validated these differences ($t=2.84$, $p<.008$).

In relation to health locus of control, no differences were found between the 2 groups in their ratings of the role that they play and the role that their doctors play in making sure they stay as healthy as possible. However, Latino Americans, more than non-Latinos, considered fate to play a very important role in their health. On a scale of 1-4, 1 being not important at all and 4 being very important, Latinos' mean rating of fate was 3.33 compared to 2.25 for non-Latinos. A *t* test revealed that these differences are worth examining ($t=2.62$, $p<.014$).

Since significant differences were found between the Latino patients who had difficulty understanding their doctor due to language problems (n=6) and those that did not (n=9), we decided to compare these groups separately. Although both groups fell within the compliance criteria on weight gain, Latinos who had language problems gained an average of 3.47 kg between dialysis

sessions compared to 2.48 for the Latinos who did not experience language difficulty. These differences in weight gain averages were significant ($t=2.54$, $p< .025$). Latinos who did not understand their doctors were also even more depressed. They scored an average of 28.5 on the depression scale compared to 17.3 for the Latinos who did understand their doctors. After comparing the means, a t test showed that the results are significant ($t=2.31$, $p< 0.38$). This finding puts the Latino patients who do not understand English at an even higher risk.

Another difference between the Latinos who understood their doctors and those that didn't was that those with English difficulty considered their doctors to have less influence on their health. Patients who understood English gave a mean score of 4 for the importance of their doctors verses 2.83 for Latinos who did not understand. This difference was significant ($t=-3.05$, $p<.009$). Rather, they considered the role of fate to be more important ($t=1.48$, $p<.107$).

Correlational results supported specific indicators of compliance in Latino Americans on hemodialysis. As predicted, there was a positive correlation between depression and average weight gain ($r= 0.5292$, $p=< .043$). Latinos who were more depressed gained more weight between dialysis sessions, hence complied less to their treatment regimens. There was also a strong positive correlation between how well Latinos understood their doctors and health locus of control. Latino patients who understood their doctors had more faith in them ($r= 0.685$ $p < .005$). Conversely, a somewhat negative correlation was found between Latinos who didn't understand their doctors and the role of fate, $r= -.4786$ $p< .071$). Finally, there was a significant negative correlation between the average K lab value and patient knowledge of kidney disease ($r= -.5036$, $p< .056$). Latino patients who received lower scores on the kidney questionnaire had higher K lab values, indicating poorer compliance.

Discussion

The results supported the predictions that Latino American hemodialysis patients, compared to non-Latinos, are less educated about their disease, more depressed and more likely to believe in an external health locus of control. It is important to note that although both groups fell within the compliance criteria, Latino American patients with difficulty understanding English complied less well, were even more depressed, believed more strongly in fate and even less in their doctors. These results are logical considering the frustration that the language barrier can cause. It is understandable for people to believe less in their doctors when they're not sure what they are recommending in the first place. However, as noted earlier, Latino Americans traditionally prefer an authoritarian relationship with their doctors (Ruiz, 1983). They want their doctor to display confidence when recommending treatment. Unfortunately, this type of relationship is impossible to established for Latino patients who have difficulty understanding English. When they can't credit their health to their own doctors, it seems that Latino Americans resort to fate, another external health locus of control.

The importance of fate and the lack of effective communication between doctors and Spanish speaking patients were notable cultural findings in this study. Clearly changes need to be made so that Latino Americans understand what is being said to them while they receive health care. Having translators available to facilitate communication would be one solution. Suggesting that everyone learn English is another. Somehow the basic needs of Latino American, such as understanding their doctors, must be addressed.

This investigation only touched the surface of how cultural and psychosocial differences

influence health in Latino Americans in the United States. The most critical issue that was revealed by this study was the prevalence and severity of depression among Latino Americans on hemodialysis. They are at severe risk of committing suicide. Further investigation and intensive intervention must be implemented immediately. While this study suggests that the language barrier and an external health locus of control contribute to depression, additional evidence is needed to determine a causal relationship.

Another great concern is the lack of disease knowledge among Latino American hemodialysis patients. This discovery may have to do with language difficulties or the limited amount of formal schooling these patients experienced. In any case, they need to be better informed of their illness so that they can take the necessary steps to follow their treatment regimens. Poor knowledge was a moderate predictor of compliance because it was correlated with high K blood averages. A thorough perception of kidney disease may lead to better compliance. Health information should be presented to Latino Americans in Spanish so that they understand the details of their condition. A Spanish speaking health care worker should be able to convey all of the pertinent information related to kidney disease and be available to answer questions and address patients' concerns. While conducting the interviews, we were gratified to know how comforted Latino patients felt by our translating important medical information that the nurses were trying to convey.

This study revealed critical issues regarding Latinos and depression, patient education, and health locus of control. Further research is needed to better assess cultural and psychosocial differences in Latino Americans on hemodialysis in the United States. Considering that Latino Americans in general are underutilizing health care in the United States and are poorly represented in the medical literature, we must focus in on their health care experiences and help them stay as

healthy as possible. Although this study contains a small sample size, it produced highly significant results. Doctors, health care providers and research scientists should be alert to the dangers facing Latino hemodialysis patients who suffer from depression, lack disease knowledge and have difficulties understanding English. Once we better understand the psychosocial and cultural differences in Latino Americans and how they influence their health and use of health care in the United States, we can assure that they be treated as effectively as possible.

Table 1

Latinos vs. Non-Latinos Mean Scores on Kidney Questionnaire, Depression Scale and Role of Fate

Variable	Mean	SD	t-value	2-Tail sig
Kidney questions				
(14 possible total)				
Latinos(n=15)	6.33	1.63	-3.80	.001
Non-Latinos(n=16)	8.31	1.25		
CES-D				
Latinos	21.80	10.49	2.84	.008
Non-Latinos	12.31	8.02		
Role of Fate				
Latinos	3.33	1.11	2.62	.014
Non-Latinos	2.25	1.18		

Table 2

Mean Weight Gain, Depression, Role of Fate, and Role of Doctor between Latinos who Did Not Understand their Doctors and Latinos Who Did Understand.

Variable	Mean	SD	t-value	2-Tail sig
Weight gain				
No understand(n=6)	3.47	.702	2.54	.025
Understand(n=9)	2.48	.763		
CES-D				
No understand	28.50	4.84	2.31	.038
Understand	17.33	11.03		
Role of Doctor				
No understand	2.83	1.17	-3.05	.009
Understand	4.0	.00		
Role of Fate				
No understand	3.83	.408	1.77	.107
Understand	3.0	1.32		

References

- Agashua, P., Lyle, R., Livesley, W., Slade, P., Winney, R., & Irwin, M., (1981). Predicting dietary non-compliance of patients on intermittent hemodialysis. Journal of Psychosomatic Research, 4, 289-301.
- Bureau of the Census. (1988). The Hispanic population in the U.S.: (Advance Report). Current population reports series P-20, No.431. Washington, DC: U.S. Department of Commerce.
- Cangiano, J. (1994). Hypertension in Hispanic Americans. Cleveland Clinical Journal of Medicine.
- Devins, G., Binik, Y., Mandin, H., Letourneau, P., Hollomby, D., Barre, P., & Prichard, S. (1990). The kidney disease questionnaire: A test for measuring patient knowledge about end-stage renal disease. Journal of Clinical Epidemiology, 43, 297-307.
- Exter, T. (1993). The largest minority. American Demographics, 59.
- Ferraro, L., Price, J., Desmond, S., Roberts, S. (1987). Development of a diabetes locus of control scale. Psychological Reports, 61, 763-770.
- Goldstein, A., Fenster, A. (1973). The role of the mental health practitioner in long-term medical treatment. Psychosomatics, 14, 153-155.
- Gonzalez, J. T., Atwood, J., Garcia, J. A., & Meyskens, F. (1990). Hispanics and cancer preventive behavior: The development of a behavioral model and its policy implications. Journal of Health and Social Policy, 1, 55-73.

- Hitchcock, P., Brantley, P., Jones, G., & Mcknight, T. (1992). Stress and social support as predictors of dietary compliance in hemodialysis patients. Behavioral Medicine, 18, 13-20.
- Holman, J., Gregory, M., Turner, C., & Smith, T. (1991). Health locus of control in end-stage renal dialysis. Journal of Consulting and Clinical Psychology, 59, 419-25.
- Lamping, D. & Campbell, K. (1990). Hemodialysis compliance: Assessment, prediction and intervention:Part 1. Seminars in Dialysis, 3, 52-56.
- Lewis, F., Morisky, D., Fynn, B. (1978). A test of construct validity of health locus of control: Effects on self-reported behavior compliance in hypertensive patients. Health Education Monographs, 6, 138-48.
- Marin, B., Marin, G., Padilla, A., & de la Rocha, C. (1982). Utilization of traditional and nontraditional sources of health care among Hispanics. Spanish Speaking Mental Health Research Center Occasional Papers: No. 14, 25p.
- Mirowsky, J., & Ross, C. (1984). Mexican culture and its emotional contradictions. Journal of Health and Social Behavior, 25, 2-13.
- Poma, P. (1983). Hispanic cultural influences on medical practice. Journal of the National Medical Association, 75, 941-946.
- Radecki, S., & Nissenon, A. (1994). Hispanics with end-stage renal disease. Annals of Internal Medicine, 9, 723-24.
- Radloff, L. S. (1977). The CES-D Scale: A self report depression scale for research in the general population. Applied Psychological Assessment, 1, 385-401.

Randall, T. (1991). Key to organ donation may be cultural awareness. The Journal of the American Medical Association, 265, 176-177.

Ruiz, P., & Ruiz, P. P. (1983). Treatment compliance among Hispanics. Journal of Operational Psychiatry, 14, 112-114.

Stewart, R. (1983). Psychiatric issues in renal dialysis and transplantation. Hospital and Community Psychiatry, 34, 623-628.

Weissman, M. M., Sholomskas, D., Pottenger, M., Prusoff, B., & Locke, B. (1977). Assessing depressive symptoms in five psychiatric populations: A validation study. American Journal of Epidemiology, 106, 203-213.

Westburg, J. (1989). Patient education for Hispanic Americans. Patient Education and Counseling, 13, 143-160.