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Provider and Clinic Cultural Competence in a Primary Care Setting

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Abstract

A multilevel approach that enhances the cultural competence of clinicians and healthcare systems is suggested as one solution to reducing racial/ethnic disparities in healthcare. The primary objective of this cross-sectional study was to determine if there is a relationship between the cultural competence of primary care providers and the clinics where they work. Forty-nine providers from 23 clinics in Baltimore, Maryland and Wilmington, Delaware, USA. completed an on-line survey which included items assessing provider and clinic cultural competence. Using simple linear regression, it was found that providers with attitudes reflecting greater cultural motivation to learn were more likely to work in clinics with a higher percent of nonwhite staff, and those offering cultural diversity training and culturally adapted patient education materials. More culturally appropriate provider behavior was associated with a higher percent of nonwhite staff in the clinic, and culturally adapted patient education materials. Enhancing provider and clinic cultural competence may be synergistic strategies for reducing healthcare disparities.

Keywords

USA; cultural competence; disparities; primary care providers; health organizations; healthcare

Introduction

In recent years, racial and ethnic disparities in health status and the delivery of healthcare have come to the forefront of healthcare research and policy. These inequities have been documented and summarized in numerous publications, most notably the Institute of Medicine (Smedley, Stith, & Nelson, 2003). As the evidence of poorer minority health and treatment has accumulated, the emphasis of public policy and research initiatives has shifted from further

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cataloging the problems to identifying and fostering the implementation of effective strategies to remedy disparities.

Both the IOM report and the National Standards for Culturally and Linguistically Appropriate Services (CLAS), promulgated by the Office of Minority Health (2000), recommend, as one among a number of strategies, a multilevel approach that enhances the cultural competence of clinicians and healthcare systems to improve racial and ethnic minority health (Smedley et al., 2003). Since publication of the CLAS Standards, there have been significant efforts by government and private organizations to provide payers and providers with user-friendly action plans and tools to improve cultural competence in the delivery of healthcare. Elevating the cultural competence of clinicians and health care systems, however, is not a straightforward task. Cultural competence is a challenging term to define, making it difficult for the average healthcare organization to independently develop and execute an effective action plan for improvement. What constitutes cultural competence can vary by healthcare organization, provider-type, organizational and community resources, and patient populations (Office of Minority Health, 2000)

Cultural competence has been broadly defined as “a set of congruent behaviors, attitudes, and policies that come together in a system, agency or among professionals that enable effective work in cross-cultural situations” (Cross, Bazron, Dennis, & Isaacs, 1989). Culture refers to the integrated patterns of human behavior that include language, thoughts, communications, actions, customs, beliefs, values and institutions of racial, ethnic, religious or social groups (Office of Minority Health, 2000), while competence signifies possession of functionally adequate knowledge, judgment, practical and thinking skills to perform in a desired way (Merriam-Webster, 2002).

Culturally competent providers and organizations possess the knowledge, attitude and skills to overcome their own inherent barriers to quality minority care such as biases (e.g. racial/ethnic prejudices, perceived lack of time, and yielding to seemingly overwhelming patient social problems), and service inaccessibility (e.g. inconvenient location, limited appointment availability and lack of care coordination). In addition, culturally competent providers and organizations develop approaches to compensate for patient characteristics that hinder the patient’s ability to benefit from healthcare services. Patient obstacles to care include limited English proficiency (LEP), low health literacy, fears (e.g. mistreatment, avoidance of stigmatizing or grave diagnoses, and deportation), beliefs that preempt treatment (e.g. mistrust, and aversion to medications, invasive treatment and preventive care), lack of knowledge (understanding of health, management of acute and chronic illness, and Western healthcare delivery norms and practices), lack of resources (e.g. insurance, funds for out-of-pocket expenses, and transportation) and inability to leave their place of employment to attend medical appointments (Martinez & Carter-Pokras, 2006). Cultural competence begins with understanding the strengths and weaknesses of the healthcare organization and providers, and the unique needs of the population being served. It is a process of increasing proficiency gained from informal and formal cross-cultural experiences rather than an endpoint that is achieved (Cross et al., 1989)

Our understanding of cultural competence in healthcare is in the formative stages. Limited empirical research has methodically investigated the interdependence between clinician and organizational cultural competence. The objectives of this study were to measure the cultural competence of primary care providers and their perceptions of the cultural competence of the clinics where they work; determine if there is a relationship between provider and clinic cultural competence; and assess whether provider demographic characteristics were associated with the cultural competence of providers. We hypothesized that there would be a positive relationship between provider and clinic cultural competence and that compared to their

counterparts, providers who were women, liberally oriented and family physicians would have knowledge, attitudes and behaviors that were more indicative of cultural competence.

Methods

Study design

We conducted a cross-sectional survey of clinicians participating in two clinical trials of interventions to enhance patient-provider communication. The studies were not meant to directly improve cultural competence. The study protocol was approved by the Institutional Review Board, and all participants provided informed consent.

Study setting and population

The study took place in 23 community based, primary care clinics located in Baltimore, Maryland (22 clinics) and Wilmington, Delaware (1 clinic) serving predominantly black (60% to 100%) and white populations from a range of socioeconomic backgrounds. The clinics represent 11 organizations including a federally qualified health center, community health centers, university hospital-affiliated outpatient centers, and independent multi-specialty practices. The study population consisted of 64 family and internal medicine physicians and 5 adult/family nurse practitioners who volunteered to participate in one of two randomized clinical trials. Providers were eligible to participate in the trials if they practiced at least 20 hours per week and planned to stay at the clinical site for at least 12 months after enrollment.

Enrollment and data collection

During the post-intervention periods of the clinical trials, providers were invited by letter to complete an Internet survey that was divided into three sections: questions about their clinic, practice and experiences; questions about cultural issues in healthcare and knowledge, attitudes and opinions about race and medical care; and two cognitive tests. Providers were told that the goal of the study was to learn whether it is possible to administer a computerized test to providers in order to measure their implicit attitudes (unconscious biases) toward race/ethnicity. Provider characteristics, including race, were collected by self-report on enrollment in the clinical trials or on the post-intervention Internet-survey.

Provider cultural competence measure

The operational framework for the provider cultural competence measure was drawn from the CLAS Standards (Office of Minority Health, 2000) and the "Process of Cultural Competence in the Delivery of Healthcare Services", an operational model of cultural competence (Campinha-Bacote, 2002). Provider cultural competence was divided into three conceptual components: attitudes, self-reported behavior and knowledge. No one instrument could be found in the literature that had established validity and reliability, and was appropriate for use with practicing primary care physicians caring for inner city black patients (Gozu, Beach, Price, Gary, Robinson, Palacio et al., 2007). Cultural competence instruments were reviewed to identify subsets of items that best reflected the cultural needs of black and white patients in a primary care setting and this study's model for operationalizing cultural competence. (See Gozu, 2007, for a list of the major instruments that were reviewed.) All items were evaluated and revised in a multi-stage review process whereby experts in health disparities research made recommendations to establish face validity of the item set. Items were pre-tested with eight clinicians. Predictive validity of the measures was evaluated by examining the relationship of the measures with provider characteristics that have been associated with the cultural competence concepts by research.

Six items representing the attitude and awareness domains were selected from Dogra's Cultural Awareness Questionnaire and Godkin's Modified-Cultural Competence Self-Assessment Questionnaire (Dogra, 2001; Dogra & Stretch, 2001; Godkin & Savageau, 2001). Preference was given to items that best captured the motivation to understand, accept and respect differences; appreciation of other cultures; and the awareness of societal impact on opportunities related to race (see Table 1). Because immigrants represent a very small percentage of the patient population for these studies, items that concerned immigrant issues were not included. Items reflecting controversial political perspectives were avoided. Revisions were made to the wording of the items so that questions were personalized rather than describing what a physician in general would think, and the items were placed within the context of race rather than society in general or culture. A five-point Likert scale measuring level of agreement (strongly disagree to strongly agree) was retained as the response set.

The Cultural Competence Assessment Instrument (CCA) was selected as the source for items reflecting the behavior domain (Schim, Doorenbos, & Borse, 2005). Two strengths of the CCA are that it assesses self-report of actual behavior rather than self-efficacy for performing a behavior and it has been demonstrated to be reliable and valid (Doorenbos, Schim, Benkert, & Borse, 2005; Schim et al., 2005; Schim, Doorenbos, Miller, & Benkert, 2003). Items were selected from the CCA that had eigenvalue scores greater than .600 and that measured the adaptation of care to meet the needs and expectations of diverse patients. If there were two items that appeared to be similar, the item that was most relevant to the primary care setting was selected. Five items were retained for measuring behavior (see Table 1). Since the CCA was designed for a multidisciplinary setting (specifically hospice care), items were reworded to be meaningful for primary care providers. The response set was modified from a five-point Likert-type scale (always, often, at times, never, not sure) to a frequency format thus standardizing the meaning to all respondents and making the response choices more exact. Respondents were asked to select the percent of time (0–25, 26–50, 51–75, 76–100) that they perform behaviors indicative of seeking culture-related information about patients; obtaining feedback regarding their cross-cultural interaction skills; and adapting care to patients' culture and social situation (see Table 1).

Exploratory factor analysis was performed with cultural competence items grouped by attitude or behavior using varimax rotation. Factors were retained that had an eigenvalue of ≥ 1.0 . An item was discarded if it was the only item that loaded on a factor or if there was limited variance in response among the study participants (i.e. $\geq 90\%$ of responses were in the same response category). All but one of the 11 cultural competence items exhibited adequate variability of response -- 90% of providers strongly agreed with a statement concerning equal access to healthcare regardless of race or social class. This item was eliminated from the cultural attitude item set. Bartlett's Test of Sphericity (attitude, $p=0.008$; behavior, $p\leq 0.001$) indicated adequate level of correlation to have an identity matrix, supporting the use of factor analysis.

The Kaiser-Meyer-Olkin (KMO) test evaluated adequacy of sample size. The KMO scores for attitude (.618) and behavior (.669) met the minimum standard of .5 for continuing with factor analysis (Hutcheson & Sofroniou, 1999). The sampling adequacy of individual variables was tested using the anti-image correlation matrix. All variable values were above .5 indicating that it was appropriate to continue with factor analysis using all of the items (Field A., 2005).

Communalities for each of the 2 categories ranged from .22 to .72 with 7 of 10 items scoring above .40. The attitude items grouped into two factors explaining 59% of the variance while behavior grouped into one factor explaining 42% of the variance. Items loaded from .52 to .84 (attitude) and .47 to .83 (behavior) on the factors. The two attitude factors were interpreted as the 'motivation' to learn about cultures within the provider's practice and society, and 'power/assimilation' attitudes signifying awareness of white advantage and acceptance of a

racial group's choice to retain distinct customs and values (see Table 1). Behavior was retained as one factor and continued to represent self-reported frequency of seeking culture-related information about patients; obtaining feedback regarding one's cross-cultural interaction skills; and adapting care to patients' culture and social situation.

The Cronbach's coefficients ranged from .50 to .64 for the attitude and behavior measures (see Table 1). According to Nunnally (1967), these statistics are sufficient for preliminary research. "In the early stages of research on predictor tests or hypothesized measures of a construct, one saves time and energy by working with instruments that have only modest reliability, for which purpose reliabilities of .60 or .50 will suffice" (Nunnally, 1967, p.226). Composite scores for the measures were developed by averaging the item scores. A higher score indicates greater cultural competence.

Knowledge was assessed using ten fact-based, multiple-choice items that were developed drawing on the expertise of the investigators and content presented in the "Provider's Guide to Quality & Culture" (2004), an Internet based learning module funded by the U.S. Department of Health and Human Services. The multiple choice items assessed knowledge of variations in patterns of disease, risk factors and treatment, underlying factors creating disparities, and professional and legal responsibilities related to care of minority groups. The knowledge score consisted of the percent of items answered correctly.

Clinic cultural competence measure

The CLAS Standards were used as a guide for developing items to measure provider perception of their clinic's cultural competence (Office of Minority Health, 2000). Providers were asked to respond to six questions concerning clinic provider and staff racial/ethnic diversity, sponsorship of cultural diversity training for providers and staff, and provision of patient education materials tailored to race/ethnicity or language.

Statistical analyses

Descriptive statistics characterized provider cultural competence and personal attributes, and clinic cultural competence measures. Prior to analysis, negative items on the attitude measure were reverse coded so a higher score indicated a more favorable attitude. Hispanic and East Indian providers comprised a small sample so they were combined into an "other" category while black, white, and Asian providers were classified in distinct race categories.

To evaluate the reliability of the clinic cultural competence measure, provider's responses to items evaluating clinic cultural competence were grouped by clinic. For dichotomous measures (clinic sponsored cultural diversity training and patient education materials), the percent of provider responses consistent with the clinic majority was calculated. There was 65% consistency in provider response within clinics to the diversity training measure. Providers were consistent 91% of the time in reporting the availability of adapted patient education materials. Responses identifying the percent of white/nonwhite providers and staff were deemed consistent if they were within 20% of the mean response for the clinic. Eighty three percent of providers reported the percentage of nonwhite staff and providers within this established range

Simple linear regression was used to determine if provider cultural competence varied by provider characteristics and the provider's report of their clinic's cultural competence characteristics. Multivariate linear regression was conducted including only those clinic and provider characteristics that were significantly related to provider cultural competence as the independent variables. Resistant linear regression models were fit if needed to reduce the effects of extreme y-variable data values. A two-sided P value < 0.05 was considered

significant. Statistics were performed using STATA 8.2 for all descriptive and regression statistics (STATA, 2003) and SPSS 14.0 for all psychometric analysis (SPSS, 2006).

Results

Provider characteristics

Forty-nine (71%) of the 69 providers enrolled in the clinical trials completed the cultural competence portion of the Internet survey. Participants and non-participants were similar by age, gender, race, specialty and years post-residency training, but participants were more likely to be board certified than non-participants (98% vs. 80%, $p < 0.01$). Participating providers included 36 internists, 9 family physicians, and 4 nurse practitioners who tended to be experienced, female and racially diverse (see Table 2). Approximately one-third of providers reported ever attending cultural competence or diversity training, and of those attending training, almost two-thirds rated the training as good to excellent. Providers reported seeing more patients that were racially or ethnically discordant from themselves than concordant. Over half of providers were very confident in caring for ethnic minorities and in providing care to disadvantaged patients.

Provider cultural competence

Results from the attitude category showed that providers tended to strongly agree with statements concerning the motivation to learn about cultures within their practice and society while they responded more neutrally when asked their level of agreement with power/assimilation statements concerning white advantage and conformity to white customs and values (see Table 1). Providers practiced behaviors indicative of cultural competence (seeking culture-related information about patients; obtaining feedback regarding one's cross-cultural interaction skills; and adapting care to patients' culture and social situation) between 26%–50% and 51%–75% of the time. The mean percent of knowledge items answered correctly was approximately 80% (± 13.74).

Clinic cultural competence

According to providers, their clinics' providers and staff were racially diverse with the largest nonwhite group being black for both groups (see Table 3). The majority of respondents reported that their clinics offered diversity training to providers and staff, and patient education materials tailored to race/ethnicity or language.

Association of provider cultural competence with clinic cultural competence

Attitude—Providers reporting a higher percent of nonwhite staff in their clinics, clinic sponsorship of cultural diversity training for staff and physicians and the availability of adapted patient education materials were more likely to have attitudes reflecting the motivation to learn about cultures within their practice and society (see Table 4). No statistically significant relationships were found between clinic cultural competence measures and power/assimilation.

Behavior—Providers who reported a higher percent of nonwhite staff in their clinics and the availability of culturally and linguistically tailored patient education materials had increased frequency of cultural competence behaviors than their counterparts (see Table 4).

Knowledge—Clinic cultural competence measures were not associated with clinical and professional knowledge relevant to minority patient care (see Table 4).

Association of provider cultural competence with provider characteristics

Attitude—As hypothesized, women, liberals, and family physicians were more likely to agree with power/assimilation statements reflecting cultural competence (see Table 5). Providers who were very confident in caring for the disadvantaged were more likely to express culturally competent power/assimilation attitudes than providers who were less than somewhat confident in caring for the disadvantaged. In contrast, provider characteristics were not associated with cultural motivation.

Behavior—Provider characteristics were generally not associated with behavior, although black providers reported a greater frequency of culturally competent behavior than whites (see Table 5).

Knowledge—Younger providers tended to score higher on the knowledge items than older providers (see Table 5). Providers expressing less confidence in caring for minorities and international medical graduates (IMGs) tended to have lower knowledge scores than their counterparts (see Table 5).

Multivariate models

Multivariate models were developed for each of the four cultural competence measures (see Table 6). The models included provider and clinic characteristics that were significantly ($p < 0.05$) associated with a provider cultural competence measure in the univariate analyses. All four models as a whole were significant ($p < 0.01$). Nonwhite staff (cultural motivation and behavior models), liberal political orientation (power/assimilation model), and age and confidence in caring for the disadvantaged (knowledge model) remained significant in the multivariate analysis. All other provider and clinic characteristics were more weakly associated with their respective provider cultural competence measure and had p -values ≥ 0.05 when considered in the extended model.

Discussion

Our study is one of the first to link provider cultural competence with the cultural competence of the clinics where they work. Our findings indicate that primary care providers who reported that their clinics had adopted recommendations made in the CLAS standards were more likely to have attitudes and behaviors that were culturally competent. However, this relationship between providers and the clinics did not hold true for knowledge relevant to caring for a racial minority population. This suggests that enhancing provider cultural competence (attitudes and behaviors) and clinic cultural competence may be synergistic strategies for reducing healthcare disparities.

There are at least three potential interpretations of the results from this cross-sectional study that should be considered. First, clinics that have adopted more culturally competent practices may influence providers to develop more culturally competent attitudes and behavior. Second, more culturally competent providers may be attracted to work in clinics with a higher level of cultural competence. Finally, providers with culturally competent attitudes and behaviors could influence the cultural competence of the clinics where they practice by advocating for diversity training, workforce diversity and use of culturally-appropriate patient education materials. Any combination of these three conditions could exist within a given clinical setting.

The effect size linking a more diverse support staff with provider cultural competence was small. Social learning theory and the attraction-selection-attrition cycle, however, supports the existence of this relationship in the varying directions proposed. Social learning theory asserts learning is affected by observing the behavior, attitudes and emotional reactions of others and

by personal experience. This effect is optimized when there is institutional support (Pettigrew & Tropp, 2006). Support staff of color may increase provider awareness of cultural issues and informally set the standards for behavior in interacting with racially discordant patients, creating an atmosphere that is welcoming or not (Chrisman, 2007). They may also assist with interpretation of patient interactions and advise providers on ways to more effectively interact with their racially discordant patients (Kairys & Like, 2006; Pacquiao, 2007). Providers' frequent contact with support staff in the provision of routine patient care and more limited time to interact with colleagues during busy clinic hours may explain why a relationship was seen with staff diversity and not provider diversity. Surrounding healthcare providers with a diverse support staff may be one way to compensate for the short supply of minority healthcare providers and to improve the delivery of culturally competent healthcare.

An alternative explanation for the association between staff diversity and provider cultural competence is that providers who are more culturally competent may self-select into more culturally competent organizations. Schneider's attraction-selection-attrition cycle expands upon this interpretation by suggesting not only that people are attracted to organizations based on compatibility but organizations select people with common attributes (Schneider, Goldstein, & Smith, 1995). Organizational homogeneity is perpetuated by people resigning or being fired when they do not fit the work environment.

The availability of clinic sponsored cultural diversity programs was associated with provider cultural motivation. Clinic sponsorship of such programs may serve as a surrogate for less visible clinic characteristics that are related to providers' motivation to learn about cultures within their practice and society. In contrast, the availability of cultural diversity programs was not associated with provider power/assimilation attitudes, culturally competent behavior, or clinical and professional knowledge relevant to caring for minority groups.

The failure to see a relationship between attendance at a cultural competence training programs (whether clinic sponsored or not) and provider cultural competence may reflect a lack of standardization in training. The literature suggests that such training programs vary considerably in curricular focus, teaching methods, and depth of experience (Beach, Price, Gary, Robinson, Gozu, Palacio et al., 2005). It is possible, for example, that providers in this study attended programs that only raised awareness of the importance of culture in the care of patients but did not include experiential learning or strategies that build skills. Didactic continuing education programs alone tend not to be effective in improving professional practice (Cauffman, Forsyth, Clark, Foster, Martin, Lapsys et al., 2002; Davis, Thomson, Oxman, & Haynes, 1995).

The provision of patient education materials adapted to the language or culture of the patients served in a clinic was associated with provider cultural motivation and culturally competent behaviors in the univariate analyses. Patient education materials tailored to culture and language may serve as cues to providers to take a complete history that includes cultural factors and to incorporate cultural issues important to the patient into the plan of care. In a synthesis of the literature, Davis et al. (1995) concluded that such patient-mediated interventions are quite effective at inducing behavior change in providers.

Knowing a provider group's characteristics may provide some guidance to better tailoring cultural competence program content to the needs of the target group. In this study, provider characteristics were associated with some but not all of the cultural competence concepts. Specifically, providers who were younger, female, politically liberal, a family physician, a U.S. medical graduate were more likely to have attitudes and/or knowledge consistent with cultural competence.

The relationship found between provider characteristics and power/assimilation attitudes is consistent with the literature and supported our hypotheses. In this study, female, family practice and liberal providers had power/assimilation attitudes that were more empathetic toward the challenges faced by minority racial groups living in a Euro-Caucasian dominated society. The association between female gender and a more positive attitude toward treating minorities has also been found in studies with medical students (Crandall, George, Marion, & Davis, 2003; Crandall, Reboussin, Michielutte, Anthony, & Naughton, 2007; Gurung & Mehta, 2001). Female physicians are more likely to attend to the psychosocial needs of patients and to encourage patient participation (Roter & Hall, 2004). More broadly, men, irrespective of race or ethnicity, score higher than women on social dominance orientation, a measure of the degree to which individuals desire and support group-based hierarchy and the dominance of 'superior' groups over 'inferior' groups (Pratto, Sidanius, Stallworth, & Malle, 1994; Sidanius, Pratto, & Bobo, 1994).

The finding that family physicians tended to have culturally competent power/assimilation attitudes is consistent with the founding principles of the family medicine movement, which emphasize providing healthcare to the underserved and providing humanistic care (Stephens, 1998). In one study, medical students choosing family medicine as a career were more likely to demonstrate a societal commitment and less likely to be concerned with personal prestige (Wright, Scott, Woloschuk, Brenneis, & Bradley, 2004). According to some scholars, liberal political orientation which indicates support for egalitarianism and the rights of minorities, and the acceptance of culturally competent power/assimilation attitudes are synonymous (Kerlinger, 1984). The belief that disadvantage such as poverty is largely mediated by societal forces rather than factors within the control of the individual underlies liberal but not conservative ideology (Gaertner, 1973).

Providers that were more confident in caring for disadvantaged patients tended to exhibit attitudes reflecting understanding of the implications of white privilege and acceptance of other cultural groups' customs and values. It may be that providers who are comfortable providing healthcare to patients who are less fortunate than themselves are those with the capacity to be open-minded towards persons from diverse social backgrounds. This characteristic underlies cultural humility, which is the ability to check the power imbalance in the provider-patient relationship, practice ongoing self-reflection and self-critique, and seek to understand the patient's unique perspective (Tervalon & Murray-Garcia, 1998).

The incongruity between confidence in caring for minorities and knowledge may be explained by students' and less experienced clinicians' blind spots about their lack of skills and abilities. In one study, nursing students scored higher than experienced hospital and public health nurses on a scale measuring confidence in performing transcultural nursing skills (Bernal & Froman, 1987). In another study, senior nursing students who received some cultural course content felt less confident in providing culturally sensitive care than similar students not exposed to the training (Alpers & Zoucha, 1996).

The inverse relationship of provider age with knowledge is consistent with curriculum trends in U.S. medical and nursing schools and the literature. In response to the increasing cultural diversity of the population, U.S. medical schools have increased their efforts to include multicultural issues in their curricula. Comparison of studies conducted in 1978 and then in 2000 found a 45% increase (from 60% to 95%) in the integration of socio-cultural issues into the curricula (Flores, Gee, & Kastner, 2000; Wyatt, Bass, & Powell, 1978). Similar studies of U.S. nursing school curricula could not be found, but there has been an increasing number of publications in the nursing literature exploring the content, teaching methods, evaluation and faculty qualifications needed to ensure that nursing programs adequately prepares nurses to meet the needs of culturally diverse patient populations.

Limitations of this study should be noted. First, a standardized measure of provider cultural competence was not used. Although there are a number of measures of provider cultural competence in the literature, few measures have been psychometrically tested (Gozu et al., 2007) and none fit our provider and patient population, and our operational definition of cultural competence. While our provider cultural competence measure has not been extensively tested, it advances earlier studies of cultural competence in practice settings which have relied on more limited measures such as providers' ability to speak a second language, attendance at cultural competence programs or global self-ratings cultural competence (Fernandez, Schillinger, Grumbach, Rosenthal, Stewart, Wang et al., 2004; Mazor, Hampers, Chande, & Krug, 2002; Wade & Bernstein, 1991)

Second, objective and comprehensive measures of clinic cultural competence would have strengthened the study. Although the researchers were unable to collect objective data, providers within clinics were reasonably consistent in their response to the clinic cultural competence items. The clinic characteristics studied were limited to those that were visible to providers in their daily work and did not include underlying organizational infrastructure (e.g. governing board diversity, community and organizational assessment and the collection of race and ethnicity data), as identified in the CLAS standards. The inclusion of these infrastructure characteristics, indicative of organizational cultural competence, in future studies would be informative.

Third, the sample size may have underpowered the study to detect relationships of provider and clinic characteristics with provider cultural competence. A number of provider and clinic characteristics were close to but did not meet the criteria for significance of $p < .05$. Although our sample size was small, it did exceed the sample size of comparable studies examining provider cultural competence in practice settings

Fourth, the cross-sectional design of this study limits our ability to draw causal inferences. Quantitative research is needed to understand in greater depth the nature of the relationships that were found. A randomized trial or longitudinal study might help to determine the temporal direction of the relationships between provider and clinic cultural competence.

Fifth, the generalizability of study findings to primary care providers working in small group and solo practices, and in rural settings is not known. The perspectives and experiences of providers choosing to work in these settings may differ from providers choosing to practice in urban and suburban locations, larger group practices or clinics with a principal mission of serving the disadvantaged. Differences in provider and clinic characteristics could alter the association between provider and clinic cultural competence.

In conclusion, we believe that the recommendations of the Institute of Medicine and the CLAS Standards to take a multilevel approach to reducing health care disparities by improving cultural competence at the clinic and the provider levels are prudent. Our study indicates that an interrelationship between provider and clinic cultural competence exists. Healthcare organizations can support clinicians in better caring for their patients of color by adopting practices that increase provider and staff awareness of the cultural needs of patients and integrate cultural competence into the daily work. Healthcare organizations must recognize that brief cultural diversity training programs are unlikely to induce changes in attitude or behavior without the implementation of additional organizational supports. Because they often have influence over their practice environments, providers should be taught not only ways of improving their own care to minority patients but also what ongoing support they should expect from the organizations where they work. Cultural competence evolves from a concerted effort by both clinicians and healthcare organizations to identify and remove the barriers impeding quality care to vulnerable populations.

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Reference List

- Alpers RR, Zoucha R. Comparison of cultural competence and cultural confidence of senior nursing students in a private southern university. *Journal of Cultural Diversity* 1996;3(1):9–15. [PubMed: 8788835]
- Beach MC, Price EG, Gary TL, Robinson KA, Gozu A, Palacio A, Smarth C, Jenckes MW, Feuerstein C, Bass EB, Powe NR, Cooper LA. Cultural competence: A systematic review of health care provider educational interventions. *Medical Care* 2005;43(4):356–373. [PubMed: 15778639]
- Bernal H, Froman R. The confidence of community health nurses in caring for ethnically diverse populations. *Image: Journal of Nursing Scholarship* 1987;19(4):201–203.
- Campinha-Bacote J. The process of cultural competence in the delivery of healthcare services: a model of care. *Journal of Transcultural Nursing* 2002;13(3):181–184. [PubMed: 12113146]
- Caffman JG, Forsyth RA, Clark VA, Foster JP, Martin KJ, Lapsys FX, Davis DA. Randomized controlled trials of continuing medical education: what makes them most effective? *Journal of Continuing Education in the Health Professions* 2002;22(4):214–221. [PubMed: 12613056]
- Chrisman NJ. Extending cultural competence through systems change: academic, hospital, and community partnerships. *J Transcult Nurs* 2007;18(Suppl 1):68S–76S. 68S–76S. [PubMed: 17204815]
- Crandall SJ, George G, Marion GS, Davis S. Applying theory to the design of cultural competency training for medical students: a case study. *Academic Medicine* 2003;78(6):588–594. [PubMed: 12805037]
- Crandall SJ, Reboussin BA, Michielutte R, Anthony JE, Naughton MJ. Medical students' attitudes toward underserved patients: a longitudinal comparison of problem-based and traditional medical curricula. *Advances in Health Sciences Education, Theory and Practice* 2007;12(1):71–86. [PubMed: 17041814]
- Cross, TL.; Bazron, BJ.; Dennis, KW.; Isaacs, MR. *Toward a culturally competent system of care.* Washington, D.C.: Georgetown University Child Development Center; 1989.
- Davis DA, Thomson MA, Oxman AD, Haynes RB. Changing physician performance. A systematic review of the effect of continuing medical education strategies. *Journal of the American Medical Association* 1995;274(9):700–705. [PubMed: 7650822]
- Dogra N. The development and evaluation of a programme to teach cultural diversity to medical undergraduate students. *Medical Education* 2001;35(3):232–241. [PubMed: 11260446]
- Dogra N, Stretch D. Developing a questionnaire to assess student awareness of the need to be culturally aware in clinical practice. *Medical Teacher* 2001;23(1):59–64. [PubMed: 11260742]
- Doorenbos AZ, Schim SM, Benkert R, Borse NN. Psychometric evaluation of the cultural competence assessment instrument among healthcare providers. *Nursing Research* 2005;54(5):324–331. [PubMed: 16224318]
- Fernandez A, Schillinger D, Grumbach K, Rosenthal A, Stewart AL, Wang F, Perez-Stable EJ. Physician language ability and cultural competence. An exploratory study of communication with Spanish-speaking patients. *Journal of General Internal Medicine* 2004;19(2):167–174. [PubMed: 15009796]
- Field, A. *Discovering Statistics Using SPSS.* London: Sage; 2005.
- Flores G, Gee D, Kastner B. The teaching of cultural issues in U.S. and Canadian medical schools. *Academic Medicine* 2000;75(5):451–455. [PubMed: 10824769]
- Gaertner SL. Helping behavior and racial discrimination among liberals and conservatives. *Journal of Personality and Social Psychology* 1973;25(3):335–341.
- Godkin MA, Savageau JA. The effect of a global multiculturalism track on cultural competence of preclinical medical students. *Family Medicine* 2001;33(3):178–186. [PubMed: 11302510]
- Gozu A, Beach MC, Price EG, Gary TL, Robinson K, Palacio A, Smarth C, Jenckes M, Feuerstein C, Bass EB, Powe NR, Cooper LA. Self-administered instruments to measure cultural competence of

- health professionals: a systematic review. *Teaching and Learning in Medicine* 2007;19(2):180–190. [PubMed: 17564547]
- Gurung RA, Mehta V. Relating ethnic identity, acculturation, and attitudes toward treating minority clients. *Cultural Diversity and Ethnic Minority Psychology* 2001;7(2):139–151. [PubMed: 11381816]
- Hutcheson, GD.; Sofroniou, N. *The Multivariate Social Scientist*. London: Sage; 1999. Factor Analysis; p. 224–225.
- Kairys JA, Like RC. Caring for diverse populations: do academic family medicine practices have CLAS? *Family Medicine* 2006;38(3):196–205. [PubMed: 16518738]
- Kerlinger, F. *Liberalism and Conservatism: The Nature and Structure of Social Attitudes*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc; 1984. Liberalism and conservatism; p. 13–25.
- Martinez IL, Carter-Pokras O. Assessing health concerns and barriers in a heterogeneous Latino community. *Journal of Health Care for the Poor and Underserved* 2006;17(4):899–909. [PubMed: 17242537]
- Mazor SS, Hampers LC, Chande VT, Krug SE. Teaching Spanish to pediatric emergency physicians: effects on patient satisfaction. *Archives of Pediatric and Adolescent Medicine* 2002;156(7):693–695.
- Merriam-Webster. *Merriam-Webster's Third New International Dictionary, Unabridged*. USA: Merriam-Webster; 2002.
- Nunnally, JC. *Psychometric Theory*. New York: McGraw Hill; 1967. Assessment of reliability; p. 226
- Office of Minority Health. *National Standards for Culturally and Linguistically Appropriate Services (CLAS) in Health Care*. Federal Register 2000;65(247):80865–80879.
- Pacquiao D. The relationship between cultural competence education and increasing diversity in nursing schools and practice settings. *J Transcult Nurs* 2007;18(Suppl 1):28S–37S. [PubMed: 17204813]
- Pettigrew TF, Tropp LR. A Meta-Analytic Test of Intergroup Contact Theory. *Journal of Personality and Social Psychology* 2006;90(5):751–783. [PubMed: 16737372]
- Pratto F, Sidanius J, Stallworth LM, Malle BF. Social dominance orientation: A personality variable predicting social and political attitudes. *Journal of Personality and Social Psychology* 1994;67(4):741–763.
- Provider's Guide to Quality & Culture. 2004. Retrieved July 25, 2007, from Management Sciences for Health website:
<<http://erc.msh.org/mainpage.cfm?file=1.0.htm&module=provider&language=English>>
- Roter DL, Hall JA. Physician gender and patient-centered communication: a critical review of empirical research. *Annu Rev Public Health* 2004;25:497–519. [PubMed: 15015932]
- Schim S, Doorenbos AZ, Borse N. Cultural competence among Ontario and Michigan healthcare providers. *Journal of Nursing Scholarship* 2005;37(4):354–360. [PubMed: 16396409]
- Schim S, Doorenbos A, Miller J, Benkert R. Development of a cultural competence assessment instrument. *Journal of Nursing Measurement* 2003;11(1):29–40. [PubMed: 15132010]
- Schneider B, Goldstein HW, Smith DB. The ASA framework: an update. *Personnel Psychology* 1995;48(4):743–773.
- Sidanius J, Pratto F, Bobo L. Social dominance orientation and the political psychology of gender: A case of invariance? *Journal of Personality and Social Psychology* 1994;67(6):998–1011.
- Smedley, BD.; Stith, AY.; Nelson, R. *Unequal treatment: Confronting racial and ethnic disparities in healthcare*. Washington, D.C.: Institute of Medicine, National Academies Press; 2003.
- SPSS. Chicago, Ill: 2006.
- STATA. College Station, TX: 2003.
- Stephens GG. Family medicine as counterculture. 1979. *Family Medicine* 1998;30(9):629–636. [PubMed: 9798125]
- Tervalon M, Murray-Garcia J. Cultural humility versus cultural competence: a critical distinction in defining physician training outcomes in multicultural education. *Journal of Health Care for the Poor and Underserved* 1998;9(2):117–125. [PubMed: 10073197]
- Wade P, Bernstein BL. Culture sensitivity training and counselor's race: effects on Black female clients' perceptions and attrition. *Journal of Counseling Psychology* 1991;38(1):9–15.

- Wright B, Scott I, Woloschuk W, Brenneis F, Bradley J. Career choice of new medical students at three Canadian universities: Family medicine versus specialty medicine. *Canadian Medical Association Journal* 2004;170(13):1920–1924. [PubMed: 15210640]
- Wyatt GE, Bass BA, Powell GJ. A survey of ethnic and sociocultural issues in medical school education. *Journal of Medical Education* 1978;53(8):627–632. [PubMed: 682153]

Table 1
Cultural competence summary measures and individual items, mean scores,
internal consistency and reliability, n=49

Cultural Competence Measures

Attitude^a

Cultural motivation

- I have the responsibility to learn about all the different groups of people that make up society.
- I should be aware of the different cultures that exist within my practice.

Power/assimilation

- Regardless of one's race, anyone can succeed in the U.S. if they try hard enough.
- Being white carries significant advantages in our society.
- Racial minorities should conform to the customs and values of the racial majority.

Behavior^b

- When I see a patient from a culture unfamiliar to me, I seek information about his/her culture.
- I ask patients to tell me about their own explanations of illness.
- I welcome feedback from co-workers about how to relate to patients from different cultures.
- I adapt my care to patient's preferences.
- I remove barriers (e.g. lack of insurance, need for interpreter) that affect the quality of healthcare for patients of different cultures.

Knowledge, %^c

(Items test knowledge of diverse groups including variations in patterns of disease, risk factors and treatment patterns, and underlying factors that lead to health disparities among racial/ethnic groups)

^a Attitude scores range from 1 (strongly disagree) to 5 (strongly agree).

^b Behavior measures percentage of time a behavior was performed. Response choices were in 25% increments ranging from 1 (0% to 25%) to 4 (76% to 100%).

^c Knowledge was assessed using 10 multiple choice questions. Perfect score equals 100%.

SD=standard deviation

Table 2

Provider characteristics, n=49

Characteristic	n (%)
Age (years), mean (SD) ^a	44.3 (8.1)
Gender	
Female	30 (61)
Race	
White	24 (49)
Black	10 (20)
Asian	9 (18)
East Indian	5 (10)
Hispanic	1 (2)
Provider type ^a	
Medical doctor	43 (90)
Doctor of osteopathy	1 (2)
Nurse practitioner	4 (8)
Board certified ^a	46 (98)
Specialty	
Internal medicine	36 (73)
Family practice	13 (27)
International medical graduate status	
U.S. graduate	36 (73.5)
International graduate	13 (26.5)
Years since completed residency training, mean (SD)	13.6 (7.6)
Years with organization, mean (SD)	9.6 (6.0)
Political Identity ^a	
Conservative	10 (27)
Liberal	27 (73)
Attended cultural competence training	17 (35)
Provider rating of cultural competence training	
Excellent	1 (6)
Very good	7 (41)
Good	3 (18)
Fair	6 (35)
Percent of patients in provider's practice who differ from provider by race/ethnicity, mean (SD)	60.67 (33.47)
Confidence in caring for ethnic minorities	
Somewhat or less than somewhat confident	22 (45)
Very confident	27 (55)
Confidence in caring for disadvantaged	
Somewhat or less than somewhat confident	31 (63)
Very confident	18 (37)

^aValues do not add up to 49 due to missing data.

SD= Standard deviation

Table 3
Clinic cultural competence characteristics, n=49

Clinic Cultural Competence Characteristics	Percent
Provider diversity, mean (SD)	
White	48.0 (28.9)
Black	31.2 (27.6)
Hispanic	3.0 (6.3)
Asian	11.8 (16.8)
Other	5.6 (10.5)
Staff diversity, mean (SD)	
White	31.0 (29.2)
Black	61.3 (30.0)
Hispanic	5.3 (15.0)
Asian	1.6 (6.0)
Other	0.8 (3.4)
Clinic provides cultural diversity training to physicians and support staff	51
Clinic has patient education materials tailored to patients' race/ethnicity or language	78

SD= Standard deviation

Table 4 Association of clinic cultural competence characteristics with provider cultural competence, simple linear regression

Clinic characteristics ^a	Provider cultural competence					
	Cultural motivation attitudes		Power/assimilation attitudes		Behavior	
	β	P	β	P	β	P
Provider diversity						
% Nonwhite providers ^b	0.00	0.148	0.01	0.092	0.00	0.475
Staff Diversity						0.471
% Nonwhite staff ^b	0.06	0.005	0.00	0.991	0.10	0.002
Provides cultural diversity training to providers and staff						0.406
No						
Yes	0.26	0.026	0.25	0.241	-0.03	0.876
Provides patient education materials adapted to ethnicity/race or non-English language						0.417
No						
Yes	0.33	0.015	0.26	0.308	0.45	0.049
					4.73	0.297

^aClinic cultural competence characteristics were collected by provider report.

^bPer 10% increase in nonwhite providers/staff

Table 5
Association of provider characteristics with provider cultural competence, simpler linear regression

Provider characteristics	Provider cultural competence							
	Cultural motivation attitudes		Power/assimilation attitudes		Behavior		Knowledge	
	β	P	β	P	β	P	β	P
Age	0.01	0.538	-0.01	0.326	0.00	0.998	-0.52	0.032
Gender								
Male								
Female	0.18	0.138	0.44	0.039	0.04	0.841	-0.65	0.866
Race		0.484		0.192		0.176		0.257
White	0.14	0.364	0.11	0.680	0.51	0.045	-0.70	0.887
Black	-0.15	0.346	-0.54	0.060	-0.01	0.974	-5.57	0.278
Asian	0.04	0.825	0.06	0.865	0.33	0.287	-10.38	0.086
Other								
Politics								
Conservative								
Liberal	-0.04	0.768	0.75	0.005	-0.43	0.063	6.04	0.199
International medical graduate status								
U.S. graduate								
International graduate	-0.06	0.703	-0.48	0.071	0.06	0.813	-9.72	0.050
Specialty								
Internal medicine								
Family practice	-0.08	0.313	0.47	0.043	-0.12	0.583	-4.01	0.340
Cultural competence Training								
No								
Yes	0.03	0.796	-0.01	0.967	-0.02	0.942	1.15	0.771
Years with organization	0.01	0.626	-0.01	0.728	0.00	0.918	0.212	0.212
Years since completed residency training	0.00	0.887	0.00	0.865	-0.01	0.713	-0.41	0.092
% Patients who differ from provider by race/ethnicity	-0.07	0.705	-0.28	0.383	-0.04	0.906	-8.58	0.131
Confidence in caring for minorities								
Somewhat or less than somewhat confident								
Very confident	-0.07	0.586	-0.02	0.907	0.27	0.160	-8.77	0.012
Confidence in caring for disadvantaged								
Somewhat or less than somewhat confident								
Very confident	0.23	0.054	0.43	0.044	0.25	0.209	-0.86	0.828

Table 6

Association of clinic and provider characteristics with provider cultural competence, multivariate linear regression models^a

Clinic characteristics ^b	Provider cultural competence ^c			
	Cultural motivation attitudes (N=48)		Behavior (N=49)	
	β	P	β	P
Staff diversity ^d				
% Nonwhite staff	0.04	0.026	0.09	0.009
Provides cultural diversity training to providers and staff				
No				
Yes	0.08	0.439		
Provides patient education materials adapted to ethnicity/race or non-English language				
No				
Yes	0.23	0.093	0.25	0.263
Provider characteristics	Power/assimilation attitudes (N=37)		Knowledge (N=46)	
	β	P	β	P
Age			-0.52	0.026
Gender				
Male				
Female	0.28	0.217		
Politics				
Conservative				
Liberal	0.65	0.013		
International medical graduate status				
U.S. graduate				
International graduate			-3.64	0.460
Specialty				
Internal medicine				
Family practice	0.33	0.190		
Confidence in caring for minorities				
Somewhat or less than somewhat confident				
Very confident			-9.43	0.011
Confidence in caring for disadvantaged				
Somewhat or less than somewhat confident				
Very confident	0.41	0.073		

^a Multivariate model includes only those variables significant at $p < 0.05$ in univariate regression analyses.

^b Clinic cultural competence characteristics collected by provider report.

^c All models: $p < 0.01$

^d Per 10% increase in nonwhite staff