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CULTURE WITHIN THE CONTEXT OF CARE: AN INTEGRATIVE REVIEW

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The purpose of this integrative review was to examine the literature on culturally relevant healthcare interventions, and their effect on health outcomes, in an attempt to determine whether culture matters in the context of healthcare delivery. Research literature on culturally relevant interventions from the past 20 years was reviewed using computerized searches of Medline and CINAHL databases. Results of the review indicate that culturally relevant interventions significantly improve health outcomes for patients with diabetes mellitus (DM), drug addiction, sexually transmitted infections (STIs), and other health problems. It appears that the design of culturally relevant interventions does not require specific knowledge of particular ethnic or cultural groups, but of cross-cultural process principles. Because the studies are highly variable with respect to design and method, it is difficult to isolate which particular aspects of the interventions are specifically associated with favorable outcomes. In addition, few of the studies examined long-term effects of the interventions on outcomes. (*Ethn Dis*. 2003;13:344–353)

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INTRODUCTION

Despite advances in science and technology, the incidence and prevalence rates of both infectious and chronic diseases continue to increase, often occurring at ages younger than previously observed. The complexity of disease management necessitates the active involvement of the patient, and, often, the family. Participation that results in successful adherence to the therapeutic regimen is dependent upon a number of important factors, such as patient satisfaction with the provider and healthcare setting, and patients' perception of the benefit of adherence on their health status.[1] Central to the concept of active patient participation and adherence is communication within the patient-provider relationship.

Studies show that patients, particularly those from racial and ethnic minority groups, have become increasingly dissatisfied with the quality of medical encounters they experience in the healthcare system.[2] The literature suggests that this may be due, in part, to a mismatch between patients and providers based on a range of cultural factors, including religion, ethnic background, and personal history. Steffenson and Colker[3] suggest that the experience of illness, disease, and perceptions of health, are culturally embedded, reporting that clinicians often develop management plans beyond patients' frames of reference.

In addition to dissatisfaction with the quality of medical encounters, overwhelming evidence indicates that ethnic and racial minority groups experience higher levels of actual disease and disability, as compared to the larger, majority US population.[4] Anticipated changes in demographics cause greater concern regarding this disparity. Minority Americans are expected to compose more than 40% of the US population by 2035, and 47% by 2050.[5] However, even with enhanced efforts designed to prevent disease and promote health, with sensitivity to socioedemographic factors, failure to develop culturally based interventions tailored to individuals and communities has resulted in continued health disparities. Increasingly, culturally relevant or competent health care has been proposed as a means of addressing the diversity of illness experiences.[4] The purpose of this integrative review was to examine the literature on culturally relevant, or competent, healthcare interventions, and their effects on health outcomes, in an attempt to determine whether culture matters in the context of culturally competent healthcare delivery.

Defining culture is difficult, because the word implies a broad spectrum of anthropological and sociological concepts. Leininger, a nursing anthropologist, defines culture as "learned and shared beliefs, values, and lifeways of a designated or particular group, that are generally transmitted intergenerationally, and influence one's thinking and action modes."[6] Culture saliently shapes and influences how individuals comprehend, live, and make patterned decisions, relative to their world. Culture, suggests Leininger, may be conceived of as a roadmap informing human lifeways and actions, often predictive of both behavior and functioning patterns.[6] Mechanic, a medical sociologist, describes

the concept of culture as the "totality of interrelated . . . ideas and activities that characterize the way of life of a particular social group."[7] Both global and inclusive, culture conceptually provides a sensitized lens through which to view distinctively complex and varied social groups. The study of culture may provide insight on consistencies in patterns of behavior within specified groups. However, Mechanic[7] cautions that the concept of culture is a scientific abstraction of reality. Great variation may exist in behavior among people within a particular cultural group; therefore, observed cultural patterns may be considered only rough approximations of how people act in specific contexts.[7]

Indeed, a cultural group may define a small, relatively homogenous group, or a much larger group that transcends geographic or social boundaries. Defining a cultural group may or may not delineate one's ethnic or minority affiliation. Ethnicity more specifically defines one's race, religion, national or geographic origin, or symbolic identification. The term minority denotes a statistical relationship (though this designation often additionally denotes a group that is singled out in their society for differential and unequal treatment), and often holds meaning related to issues of power, control, and access to resources.[8]

Reflecting both anthropological and sociological perspectives of culture, the Office of Minority Health (OMH), US Department of Health and Human Services, defines culture as "integrated patterns of human behavior that include language, thoughts, communications, actions, customs, beliefs, values, and institutions of racial, ethnic, religious, or social groups."[9] The OMH indicates that cultural competence involves blending congruent behaviors, attitudes, and policies, within systems or agencies, or among professionals, in order to effectively work within cross-cultural contexts involving beliefs, behaviors, and needs of healthcare consumers and their communities.[9]

The term cultural competence is used in the literature interchangeably with cultural sensitivity, cultural awareness, cultural congruence, cultural relevance, and other related terms, thereby suggesting that these terms are conceptually homogenous. Upon scrutiny, however, these terms are conceptually distinct. Cultural sensitivity, or awareness, refers to examination of one's own assumptions regarding other cultural groups, and becoming aware of how these notions might affect perceptions of, and prejudices toward, culturally different groups.[10] Cultural congruence refers to a match between the delivery of care and cultural values, beliefs, and patterned behavior of the care recipients.[6] Cultural relevance involves the perception of the care recipient in terms of the cultural appropriateness of the delivery of health services.[11] Cultural competence, as suggested by the OMH,[9] involves the actual integration of congruent behaviors, attitudes, and policies, within the delivery of health care in cross-cultural situations. In short, according to the research literature, several terms are used interchangeably when referring to the concept of cultural competence, indicating the lack of an overall consensus on the use of terms, or operational definitions, in relation to cultural competence.

The literature analyzed in this review included studies examining culturally competent healthcare interventions targeted at ethnic minorities in order to ascertain whether culturally competent care empirically influences health outcomes, thereby contributing to the elimination of the disproportionate burden of disease and illness experienced by ethnic minority groups. Although the studies reviewed focus on interventions with individuals from ethnic minorities, this does not imply that the concepts discussed in this paper apply only to such populations. Culturally competent care is likely to be relevant for other vulnerable populations, those different from the mainstream and of varying SES, such as women, the elderly, gays and lesbians, people with disabilities, and religious groups.[12]

METHOD

The review of the research literature on culturally competent interventions involving ethnic minorities was based on the guidelines of a Cochrane Review. These guidelines include specifying selection criteria and search strategy for studies presented in the integrative review, and describing and evaluating such studies in terms of methodological quality and particular findings.[13]

Selection Criteria

Literature selected for the present integrative review had to meet specific eligibility criteria, which included a requirement that the study's focus involve measuring culturally competent healthcare interventions, targeted at ethnic minority populations, through the use of an experimental, or quasi-experimental, design. Because a general consensus is lacking on the terminology and definition of cultural competence, interventions were considered culturally competent if they involved using culturally specific approaches and strategies to address the development, implementation, and testing of culturally relevant materials and methods for a culturally matched target group.

Descriptive studies addressing the theoretical and clinical perspectives on the role of culture in human response to chronic illness were excluded in terms of specific analyses for the literature review. Likewise, studies based on health promotion, illness adjustment, and behavioral response models, which factor in culture as a mediating variable in assessing health outcomes, were also excluded.

Search Strategy

Using OVID Software, a computer-generated search was performed, specif-

ically accessing the MEDLINE and CINAHL databases from 1980–2001. The terms health, health care, medicine, healthcare interventions, minority health, culture, cultural, culturally congruent, transcultural nursing, cultural anthropology, cross-cultural comparison, cultural characteristics, cultural diversity, intervention, and intervention studies, were entered as key terms. Fourteen intervention studies were identified as fitting the search criteria for review. These studies have been published in journals representing the disciplines of medicine, nursing, and public health, including the *American Journal of Public Health; Diabetes; Diabetes Care; Diabetes Educator; Health Promotion International; International Journal of Nursing Studies; Journal of Community Health; Pediatrics; Journal of Consulting & Clinical Psychology; New England Journal of Medicine;* and *Substance Use and Misuse.*

RESULTS

A review of the literature related to culture and health care revealed an abundance of descriptive research unrelated to the focus of this review, which was, therefore, excluded. However, it is important to note that these descriptive studies revealed the complexity of issues that contribute to the development of culturally relevant interventions. The recurrent themes of the descriptive studies included: 1) elements of communication of information, teaching tools or styles of teaching, and primary language used to convey information; 2) differences in explanatory models between individuals and the healthcare system or healthcare providers; 3) the physical environment of the healthcare setting, and the individual's home environment; and 4) cost or perceived cost, of health care. Therefore, findings from descriptive studies have served to inform researchers in the development and testing of culturally relevant and competent interventions.

The search of the literature on culturally competent healthcare interventions resulted in a small, yet compelling, number of studies demonstrating significantly improved outcomes for patients with DM, drug addiction, STIs, and other health problems, after receiving culturally competent or relevant interventions (see Table 1). The following integrative review analyzes the 14 intervention studies, revealing that critical methodological aspects of the studies (sampling, intervention duration, cultural competency, and measurement) must be considered when drawing conclusions about the effectiveness of the interventions.

Sampling

Most of the studies reviewed employed convenience sampling procedures. The use of non-probability methods apparently yielded relatively homogenous samples, particularly in terms of socioeconomic status (SES) and level of educational attainment. In several studies, a majority of subjects reported a low SES. For some, annual income was reported to be less than $15,000, and for most, less than $10,000 (with family income less than $30,000). The majority of subjects in 9 of 14 studies had completed <12 years of education. The lower SES of subjects may represent the largely urban and rural recruitment samples of the studies reviewed. While the issue of generalizability to other patient populations must be considered cautiously, it is important to note that SES may be less important to health outcomes than the adequacy of interventions in meeting the specific needs of target populations, particularly as the intervention applies to culture.

Intervention Duration

One theme that emerged from the literature is the discrepancy in intervention durations between experimental and control groups. With few exceptions, interventions considered culturally competent or relevant involved spending more time with experimental subjects than with control groups. For instance, in a study by Longshore, Grills, and Annon,[14] the experimental group received a 165-minute intervention of peer counseling, needs assessment, referrals for drug use, a traditional African-American meal, and a video. The control group intervention consisted of a standard needs assessment with appropriate referrals, and lasted only 130 minutes. In a study conducted by Shain et al,[15] the experimental group intervention consisted of one 3–4 hour multi-component session of STI education and prevention, while the control group participated in a more standard information session that lasted 15 minutes.

In a randomized clinical trial involving 3 distinct treatment conditions providing varying amounts of time and attention, Keyserling et al[16] demonstrated that a culturally appropriate clinic- and community-based intervention for African-American women with type 2 diabetes was associated with modest increases in physical activity. During a 12-month period, the clinic- and community-based intervention group received 4 clinic visits involving individual counseling, received monthly phone calls from a peer counselor, and attended 3 group sessions. The clinic intervention group, during that same time period, received 4 clinic visits involving individual counseling sessions. The minimal intervention group received only 2 general pamphlets on diabetes published by the American Diabetes Association.

Similarly, although not explicitly stated, in the study by Vorhees et al,[17] the duration of intervention for the experimental group surpassed the "minimal intervention" group by adding counseling sessions, church sermons, and audiotapes on smoking cessation, in addition to a baseline health fair. The provision of culturally appropriate care may require more time; however, the fairly large discrepancy in duration of intervention between experimental and

Table 1. Culturally Relevant Intervention Studies

Author	Design	Sample	Intervention	Measure(s)	Results
Alcalay, Alvarado, Balcazar, Newman, & Huerta (1999).	Pre/Post-test	Convenience sample *N*=344 Race-Latino (18 to 34 yo=50% and 35 to 54 yr=50%) Median Age=27.4.	A multi-media bilingual community outreach project.	• Awareness, knowledge about CVD risk factors • Knowledge • Behavior changes	Pre- vs. post-test N=328 • Awareness & knowledge of CVD preventative behaviors: improved (70% vs. 51%)
Brown & Oyomopito (1996).	Two group Pre/Post-test	Convenience sample *N*=48 Women, Ethnicity: Greek Control (*N*=22) M Age (SD): 46.8; Experimental: (*N*=26) M Age (SD): 47.0.	Experimental: 3 mo. Group sessions/exercise program, f/u, culturally specific, 3 mo. f/u independent exercise. Control: No intervention	• Body composition • Serum lipids • Exercising HR • Dietary fat intake	12 and 24 post • BMI • Exper.>Control (*P*=0.001) • Resting BP (diagnostic) • Exper.>Control (*P*<0.001) • Exercising heart rates • Exper.>Control (*P*<0.001) • Self-report dietary fat intake • Exper.>Control (*P*=0.05)
Black, & Teti (1997).	RCT	*N*=64 Race: AA Experimental Group (*N*=29): Mean Maternal Age (SD)=17.1 (1.1); Control Group (*N*=35): Mean Maternal Age (SD)=16.5 (1.3).	Experimental: take-home culturally sensitive video of breastfeeding. Control: No intervention.	• Maternal attitudes toward mealtime communication and videotapes	(*N*=59) • Positive change in maternal attitude toward mealtime communication: Experimental>Control (*P*=0.001) • Improved maternal communication during mealtime: Experimental>Control (*P*=0.04)
Brown, & Hanis (1995).	One group Pre-test/ Post-test feasibility	Randomly selected *N*=7 Race/ Ethnicity: Mexican American M Age (SD)=60.8 (3.0); Women=3, Men=2.	8 weeks of education/group support with family or friend using native language.	• Diabetes knowledge • Weight • Fasting blood sugar • HgbA1c	3 month post-test • Knowledge: • (*P*=0.04) • Fasting Blood Sugar: • (*P*=0.04) • HgbA1c: • (*P*=0.04)
Keyserling, Samuel-Hodge Ammerman, et al. (2002).	RCT	*N*=200 Women; Race: AA; M Age: Group A 58.5, Group B 59.8, Group C 59.2.	Control Group A: Clinic and community-based intervention group (4 monthly individual, nutritional counseling visits, 3 group sessions, and 12 monthly telephone calls from peer counselors); Control Group B: Clinic intervention group (4 monthly individual, nutritional counseling visits); Control Group C: Minimal intervention group (educational pamphlets provided through mailings).	• Physical activity (PA) levels as measured by Caltrac accelerometer	Comparisons of adjusted means for PA at 6 (*N*=175) and 12 months (*N*=167) • Group A vs. C Difference (SE)=44.1 (15.8); 95% CI=13.1–75.1; *P*=0.005. • Group B vs. C Difference (SE)=33.1 (15.1); CI=3.3–62.8; *P*=.029. • Group A vs. B Difference (SE)=11.0 (15.6); CI=19.6–41.7; *P*=0.48.
Kalichman, Kally, Hunter, et al. (1993).	RCT Pre-test/Post-test	*N*=106 Women; Race: AA Demographics not specified by group: M Age (SD)=32.1 (7.8).	Control #1: Std. health video, 2 white broadcasters; Control #2: Std. health video by AA female; Experimental: Culturally relevant health video by AA female.	• # of condom requests • # of subjects tested for HIV at 2 wks post	• Condom requests Exper.>Control #1 (91% vs 50%); Control #2>Control #1 (88% vs. 50%) (*P*<0.001); # of subjects tested for HIV

Table 1. Continued

Author	Design	Sample	Intervention	Measure(s)	Results
					• Exper.>Control #1 & #2 (18% vs. 0) (*P*=0.01)
Longshore, Grills, & Annon (1999).	RCT Pre-test/Post-test	*N*=222, Race: AA Exper. (*N*=112, M Age 40.7 Women=35.4%, Men=64.6%; Control (*N*=110); M Age 44.8; Women=42.0%, Men=58.0%.	Exper.: Peer counseling assessment, resources/referrals, traditional AA meals and video (165 min) Control: STD assessment, resources/referrals (130 min).	• Participation • Client's motivation • Counselors' judgment of client participation, intention to change • Client-Counselor's rapport	Experimental vs. Control • Involvement: • (*P*=.04) • Participation: • (*P*=.0001) • Self-disclosure: • (*P*=.0001) • Help-seeking: Improved (*P*=.0003)
Marlow, E., Melkus, G.D., Bosma, A.M. (1998).	One group Pre/Post-test design feasibility	Convenience sample *N*=24 Race: Winnebago NA M Age (SD)=15 (0.5).	Peer led workshop, culturally relevant diabetes education, individualized fitness profiles.		(*N*=9) Knowledge scores improved for 89% of the sample (Mean Scores: 49% vs. 90%)
Melkus, Spollett, Tuohy, et al. (1999).	One group repeated measures feasibility	Convenience sample N=27 Women, Race: AA M Age (SD)=52.3 (6).	Culturally competent 6 wk. group diabetes ed. program, monthly NP care visits.	• Fasting blood sugar • HgbA1C • Self-efficacy • Problem areas in diabetes (PAID)	3 and 6 month (*N*=25) • HgbA1C: • (*P*=0.008) • Fasting blood sugar: • (*P*=0.05) • Self-efficacy • While problems • (*P*=0.06, NS)
O'Donnell, San Doval, Duran, & O'Donnell (1995).	RCT Pre test/Post test	*N*=3257, Race: AA: *N*=2013; Hispanic; *N*=1244 Race by group N/A. M Age (SD): Black men 29.1 (9.5), Black women 28.4 (9.7), Hispanic men 31.5 (9.9), Hispanic women 30.2 (10.8).	Experimental #1 (standard) Culturally relevant STD video. 20 min. Experimental #2 Culturally relevant STD video, discussion, and skills session 40 min. Control: Routine STD education.	• Condom acquisition through coupon redemption	• Condom acquisition: Experimental #1>Control (27.6% vs. 21.2%) *P*<0.0001 Exper. #2>Exper. #1 (36.9% vs. 27.6%) *P*<0.0001
Rossiter, J. C. (1994).	2-group RCT repeated measures	*N*=182, Women, Ethnicity: Vietnamese Experimental group (*N*=108) Control group (*N*=86).	Experimental: Ed. video, 25 min., 3 culturally relevant breastfeeding education sessions 2 hours. Control: Take home pamphlets.	Postpartum, 4 wks, 6 mo. • Knowledge/attitude breastfeeding • Intention & actual breastfeeding	• Knowledge Exper.>Control (*P*<0.001); Attitudes improved: exper.>Control (*P*<0.05); Actual feeding behavior: Exper.>Control 70.2% vs 37.8% (*P*<0.001), Exper.>Control 50.0% vs 25.6%, (*P*=0.001)
Shain, Piper, Newton, Perdue, Ramos, Champion, Guerra (1999).	RCT repeated measures	Randomized after stratification by race and ethnicity. *N*=617 women; Exper. (*N*=313): M Age 21.8; Race: MexAm 70%, AA 30%, Control (*N*=304): M Age 21.3; Race: MexAm 69%, AA 32%.	Control: Standard counseling (15 min.). Experimental: 3 multicomponent small group sessions with female facilitator of same gender and ethnicity (3–4 hrs).	Rates of subsequent STD evaluated on an intention to Tx basis	At 6 mo follow-up (*N*=509) Subsequent infection: • Exper.>Control (*P*=0.05) 12 mo follow-up (*N*=545) Subsequent infection: • Exper.>Control (*P*=0.008)

Table 1. Continued

Author	Design	Sample	Intervention	Measure(s)	Results
Sussman, S., Parker, V.C., Lopes, C., Crippens, D.L., Elder, P., Scholl, D. (1995).	Two group Pre-/Post-test design	Convenience sample *N*=267 Experimental (*N*=122) M Age (SD). 12.3 (1.2); Gender: Women=50%, Men=50%; Race: AA=40% Latino=45%, Asian=3%, White=2%, Native American/Pac Islander/Mixed=10%.	Experimental group: Culturally relevant smoking prevention video. Control: Standard smoking prevention video.	• Knowledge about effects of smoking • Intention to smoke in the future • Smoking refusal self-efficacy.	Post-test vs. pre-test • Knowledge about effects of smoking improved Exper.>Control ($P<0.05$)
Vorhees, Stillman, Swank, Heagerty, et al. (1996).	RCT Pre-test/Post test	*N*=1094, Race: AA Intensive intervention (*N*=199): M Age (SD)=46.10 (11.5); Gender: Women=68.9%, Men=31.1%; Minimal intervention (*N*=93): M Age (SD)=47.05 (13.5); Gender: Women=75.3%, Men=25.7%; Control group (*N*=802): Mean age (SD)=43.24 (15.1); Gender: Women=65.2%, Men=34.8%.	Intensive: Health fair, 4 pastoral sermons on smoking, counseling, support groups, take home resources. Minimal group: Health fair and AA specific pamphlet. Control: Phone surveys of self-reported smoking and quit status.	• Self-reported smoking quit rates • Biochemically validated smoking quit rates • Smoking behavior change	• Self-reported smoking quit rates • Intensive>Minimal>Control (27.14% vs. 21.5% vs. 2.87%) ($P<0.5$) • Smoking behavior change (*N*=291): Intensive>minimal (47% vs. 34%) ($P=0.05$)

RCT = Randomized Control Trial. Race: AA = African American; NA = Native American.

The search of the literature on culturally competent healthcare interventions resulted in a small, yet compelling, number of studies demonstrating significantly improved outcomes for patients with DM, drug addiction, STIs, and other health problems, after receiving culturally competent or relevant interventions.

control groups raises questions regarding the significance of the effects of time and attention on health outcomes.

O'Donnell, San Doval, Duran, and O'Donnell[18] reported significantly better outcomes in coupon redemption for condoms after using a culturally specific video and group session vs using a culturally specific video, alone. Despite the fact that both groups received a cultural intervention, the group that had more time to interface with facilitators showed significantly greater improvements in outcome measures. Therefore, it may have been a combined effect of cultural appropriateness and time or attention.

On the other hand, in the study by Kalichman, Kally, Hunter, Murphy, and Tyler,[19] 3 groups watched a video of equal length (20 min) related to sexual and drug use behaviors, which varied with respect to cultural specificity. Control video #1 was a standard public health message presented by the former Surgeon General along with 2 White professional broadcasters. Control video #2 contained information identical to that of control video #1, but utilized African-American women presenters, a

cultural match for the subject population. The experimental video stressed culturally relevant values identified by focus groups through 3 themes, including cultural pride, community concern, and family responsibility. The third video was experimental, and used the same African-American presenters from control video #2. Results from this study showed a significant increase in outcomes for the experimental groups, compared to controls. All other services provided to the groups were equal in duration and attention. Perhaps cultural appropriateness, alone, resulted in positive outcomes.

Overall, the literature revealed discrepancies in the duration of interventions between experimental and control groups. These discrepancies serve to confound the reported findings related to the efficacy of culturally competent or relevant interventions. It remains unclear if culturally competent or relevant interventions solely contributed to positive outcomes in several of the previously mentioned studies. It appears that the provision of time and attention may also contribute to improvements in health-related outcomes. Further experimental research, in which equal time and attention is equally allocated to both interventional and a control group is warranted in order to ascertain the impact of culturally competent care on outcome measures.

Culturally Competent and Other Related Terms

Discussing intervention duration raises the larger issue of how to make an intervention culturally competent. As mentioned earlier, the descriptive literature identifies a number of broad categories as crucial components for ensuring cultural competence. The studies reviewed incorporated many of these concepts into interventions, indicating the competence of the study designs in relation to the cultural needs of the targeted groups. As previously discussed, however, the term cultural competence is often used interchangeably with several other related terms, although they are conceptually distinct. The use of terminology, and the incorporation of associated concepts into intervention designs, therefore, leaves great room for interpretation.

In the studies reviewed here, various methods were implemented to determine the components needed to design these often compelling, culturally targeted interventions. Sussman et al[20] defines cultural sensitivity as an "awareness of, and accommodation to, the lifestyle of an identifiable group of people," yet, the authors offer little evidence of their commitment to this concept in developing their intervention. They mention only one research article as a reference for their intervention design, designed to demonstrate that hip-hop associated messages may be the only way to reach African-American adolescents. Cultural "accuracy" of the intervention was weakly measured by asking subjects, in a post-intervention questionnaire, if they found the video to be culturally appropriate.

Other researchers based intervention design more solidly on previous research, and on theories such as those of Black and Teti,[21] who used, in part, a Social Learning Theory Model, relying on the identification of culturally sensitive peer models to demonstrate optimal behaviors. The authors used an advisory board of African-American adolescent mothers (peers of the subjects in the study) to develop the video used in this intervention. Shain et al[15] also rigorously substantiated the cultural relevance of their interventions. In this study, 25 focus group interviews, and 102 individual interviews were conducted, and extensive observations made, within the target community, in order to identify components for cultural appropriateness. This cultural data was collected over 18 months, integrated into the AIDS Risk Reduction Model, and supported by advice from a multiracial and multi-ethnic team. Longshore et al[14] designed their intervention according to previous anthropological and sociological research about the target population. These researchers explicitly state the parameters of their culturally congruent intervention as one that affirms the heritage, rights, and responsibilities, of African Americans.

In Brown and Harris' research,[22] a cultural intervention was developed by an interdisciplinary, multicultural team. The videos utilized in group discussions with the experimental group had been previously shown to address important differences in the Mexican-American community being studied. Vorhees et al[17] based the cultural sensitivity of their intervention on a comprehensive assessment of the population and community that involved environmental observations, focus groups, and information gathered from key members of the community (including church pastors) through informed interviews.

In the study by Melkus et al,[23] cultural appropriateness was informed by a descriptive study of diabetes care and education targeted toward urban Black women. This study was followed by focus groups, in which the women discussed their diabetes care and education needs. The points of importance gleaned from these encounters, along with the use of a community advisory board of African-American leaders from churches, social agencies, and health centers, substantiated the adequacy of their intervention.

It is important to note here the issue of terminology, as mentioned earlier. A review of the literature confirms that there is still no consensus on the use of terms, or on operational definitions, among intervention studies of culture and health outcomes. However, varied terminology may be of little importance when the cultural appropriateness of the intervention is substantiated by design methods indicative of cultural competence.

Not only is the design of the intervention essential, but also the interven-

tion's audience and method of delivery. Most studies reviewed[14,15,17,19–21,24–25] utilized peers as clinicians, facilitators, educators, and/or role models, either in person or through videotapes. These individuals shared the subjects' ethnic/cultural backgrounds, residential community, and/or personal experience with the health topic under study. Many studies involved lay volunteers from the target community to help in various aspects of intervention delivery.[14,17,22,24–26] Stillman et al[27] reported that use of lay volunteers not only enhanced cultural appropriateness for their target population, but also contributed to the acceptance of the program by establishing trust between researchers and participants. In addition, many studies specifically incorporated the native language of subjects in intervention delivery and associated written materials,[15,18–20,23,28] and nearly all studies involved either intensive individual support, group support, or both.[13–15,17,18,22–24,28] In most of the interventions reviewed here, the above components appeared to be considered crucial to health outcomes.

Outcome Measures

One of the greatest conceptual limitations of the studies reviewed here are the outcome measures. Results of long-term effects on health outcomes are limited across the studies. Studies with long-term post-intervention follow up include those of Shain et al,[15] Vorhees et al,[17] and Rossiter.[28] In the studies of Shain et al[15] and Vorhees et al,[17] a positive effect on outcome measures was still maintained at 1 year post-intervention. However, the culturally targeted education program studied by Rossiter[28] failed to sustain the effects of breast-feeding behavior at 6 months post-intervention. In fact, the rate of breast-feeding at 6 months post-intervention among subjects in the experimental group was reduced by half. Lack of long-term follow-up measures may be a result of initial studies focusing on the feasibility of programs, methods, and implementation, as related to cultural context. Nevertheless, long-term outcomes are critical for improving health, and decreasing health disparities. Further research measuring long-term intervention effects is needed.

Another issue related to study outcomes is the methods by which various measures were determined. Some studies chose to look at more objective changes in physiological outcomes (ie, HbA_{1c}, blood sugar values, and positive infection cultures), while others concluded positive effects based on more subjective, qualitative outcomes, such as participants' satisfaction with the intervention, or their degree of participation. The broader question that emerges out of this great variation in outcome measures is: what constitutes a health outcome? This point is highlighted in the study by Longshore et al.[14] The authors used measurements such as degree of subject involvement in the intervention, degrees of motivation to seek help for drug use, and subject's rapport with intervention counselors, to demonstrate the positive effect of the intervention. The critical reader is left wondering whether these results really indicate or imply anything regarding actual changes in drug-use, help-seeking, or treatment-seeking behaviors. The authors, themselves, identify this limitation between the study's results and relevance to overall health.

O'Donnell et al[18] used condom acquisition through redeemed coupons as their sole outcome measure of a culturally appropriate, video-based education intervention regarding STIs. Although the authors attempted to show an increased level of motivation regarding safe sex practices by using coupons redeemable only from a pharmacy located several blocks away from the clinic, this behavior still does not necessarily indicate a behavior change resulting in STI/HIV risk reduction. Kalichman et al[19] also used condom purchases, and requests for free condoms, as a behavioral measure to show the effects of a culturally tailored HIV-AIDS risk reduction intervention.

CONCLUSION

A critical analysis of studies designed to measure the effects of culturally competent interventions on health outcomes, reveals significant improvements for subjects receiving culturally competent, or relevant, care, compared to those who did not. This review of the literature indicates that culture does, indeed, matter within the context of healthcare. Future research is needed to determine the long-term efficacy of culturally relevant interventions. Further research examining the process and methods for culturally relevant healthcare interventions is also needed. Studies such as that by Quinn and McNabb,[29] regarding standardized training of lay health educators, provide an example of how substantiating methods for implementation of cultural intervention components can be useful, and are important for accurate replication. Health systems have little evidence regarding effective cultural competency techniques, or on when and how to implement them properly.[10] With such techniques or strategies adequately developed and tested, dissemination and translation of cultural competency would be more likely, eventually leading to the integration of these practices within healthcare systems. Overall, researchers in clinical settings indicated that interventions were relatively easy to implement, without much excess expenditure of time or money. In fact, in the study by Kalichman et al,[19] low-cost videotapes reflecting appropriate cultural norms, values and language, though produced with limited resources, were more effective in altering risk behaviors than were less culturally sensitive, professionally produced videotapes. Perceived barriers may be the greatest obstacle to integrating these interventions into healthcare agencies. The study by O'Donnell et

A critical analysis of studies designed to measure the effects of culturally competent interventions on health outcomes, reveals significant improvements for subjects receiving culturally competent, or relevant, care, compared to those who did not.

al[18] discusses the healthcare community's misconception of insurmountable barriers to implementing culturally appropriate interventions.

The literature suggests that effective interventions do not require specific knowledge of the ethnicity or culture of every patient. Broader, conceptual themes, identified here, are applicable to diverse ethnic and cultural groups, and may be efficiently incorporated into health care by creating partnerships with individuals from target communities. It is also suggested that culturally competent health care may not be an issue merely of quality. Some advocate for cultural competency as a matter of social justice, suggesting that it is an entitlement rather than a luxury, regardless of its impact on quantifiable outcomes.[10] Recognizing the need for equitable health care, and for a national consensus on cultural and linguistic standards for such care in the United States, the Office of Minority Health recently released a set of standards for culturally and linguistically appropriate services.[4] Culturally competent care may be considered a mechanism by which to ensure the observance of consumer rights, patients' rights, in this case, and may serve to improve health outcomes, and to decrease the health disparities that currently exist in this country.

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REFERENCES

1. Haynes B, Taylor DW, Sackett DL. *Compliance in Health Care.* Baltimore, Md: Johns Hopkins University Press; 1981.
2. Saha S, Komaromy M, Koepsell TD, Bindman AB. Patient-physician racial concordance and the perceived quality and use of health care. *Arch Intern Med.* 1999;159(9):997–1004.
3. Steffenson MS, Colker L. Intercultural misunderstandings about health care: recall of descriptions of illness and treatment. *Soc Sci Med.* 1982;16(22):1949–1954.
4. US Department of Health and Human Services. *Recommendations on National Standards for Cultural and Linguistic Competence.* Washington, DC: Office of Minority Health; 2000.
5. US Department of the Census. *Current Population Reports, Series P25-1130: Population Projections of the United States by Sex, Race, and Hispanic Origin, 1995 to 2050.* Washington, DC: US Bureau of the Census; 1996.
6. Leninger M, McFarland MR. *Transcultural Nursing: Concepts, Theories, Research and Practice, 3rd Edition* New York: McGraw Hill. 2002.
7. Mechanic D. *Medical Sociology: A Selective View.* New York, NY: The Free Press; 1968.
8. Kelley BR. Cultural diversity in clinical practice. In: Fox JA, ed. *Primary Health Care of Children.* New York, NY: Mosby; 1998.
9. Department of Health and Human Services, Office of Public Health and Science. *Moving Toward Consensus on Cultural Competency in Health Care. Closing the Gap.* 2000.
10. Brach C, Fraser I. Can cultural competency reduce racial and ethnic health disparities? A review and conceptual model. *Med Care Res Rev.* 2000;57(suppl1):181–217.
11. Cross TL, Bazron BJ, Dennis KW, Isaacs MR. *Towards a Culturally Competent System of Care: A Monograph on Effective Services for Minority Children Who Are Emotionally Disturbed.* Washington, DC: Child and Assistance Center, Georgetown University Child Development Center; 1989.
12. Chipkin SR, de Groot M. Contextual variables influencing outcome measures in minority populations with diabetes mellitus. *Diabetes Spectrum.* 1998;11(3):149–160.
13. Cochrane Collaboration. Preparing a systematic review of the effects of healthcare. 2000. Available at: http//www.cochrane.dk/cochrane/handbook.
14. Longshore D, Grills C, Annon K. Effects of a culturally congruent intervention on cognitive factors related to drug-use recovery. *Subst Use Misuse.* 1999;34(9):1223–1241.
15. Shain RN, Piper JM, Newton ER, et al. A randomized controlled trial of a behavioral intervention to prevent sexually transmitted disease among minority women. *New Engl J Med.* 1999;340(2):93–100.
16. Keyserling TC, Samuel-Hodge CD, Ainsworth BE, et al. A randomized trial of an intervention to improve self-care behaviors of African-American women with type 2 diabetes. *Diabetes Care.* 2002;25(9):1576–1582.
17. Vorhees CC, Stillman FA, Swank RT, Heagerty PJ, Levine DM, Becker DM. Heart, body, and soul: impact of church-based smoking cessation interventions on readiness to quit. *Prev Med.* 1996;25(3):277–285.
18. O'Donnell LN, San Doval A, Duran R, O'Donnell C. Video based sexually transmitted disease patient education: its impact on condom acquisition. *Am J Public Health.* 1995;85(6):817–822.
19. Kalichman SC, Kally JA, Hunter TL, Murphy DA, Tyler R. Culturally tailored HIV-AIDS risk-reduction messages targeted to African-American urban women: impact on risk sensitization and risk reduction. *J Consult Clin Psychol.* 1993;61(2):291–295.
20. Sussman S, Parker VC, Lopes C, Crippens DL, Elder P, Scholl D. Empirical development of brief smoking prevention videotapes which target African-American adolescents. *Int J Addict.* 1995;30(9):1141–1164.
21. Black MM, Teti LO. Promoting mealtime communication between adolescent mothers and their infants through videotape. *Pediatrics.* 1997;99(3):432–437.
22. Brown SA, Harris CL. A community-based, culturally sensitive education and group-support intervention for Mexican Americans with NIDDM: a pilot study of efficacy. *Diabetes Educator.* 1995;21(3):203–210.
23. Melkus GD, Spollett G, Tuohy B, et al. Nursing intervention of care and education for Black women with type 2 DM. *Diabetes.* 1999;48(suppl):158.
24. Marlow E, Melkus GD, Bosma AM. STOP diabetes! An educational model for Native American adolescents in the prevention of diabetes. *Diabetes Educator.* 1998;24(4):441–450.
25. Alcalay R, Alvarado M, Balcazar H, Newman E, Huerta E. Salud para su corazon: a community-based Latino cardiovascular disease prevention and outreach model. *J Community Health.* 1999;24(5):359–379.
26. Brown WJ, Oyomopito R. Effectiveness of a bilingual heart health program for Greek-Australian women. *Health Promot Int.* 1996; 11(2):117–125.

27. Stillman FA, Bone LR, Rand C, Levine DM, Becker DM. Heart, body, and soul: a church-based smoking-cessation program for urban African Americans. *Prev Med.* 1993;22:335–349.
28. Rossiter JC. The effect of a culture-specific education program to promote breastfeeding among Vietnamese women in Sydney. *Int J Nurs Stud.* 1994;31(4):369–379.
29. Quinn MT, McNabb WL. Training lay health educators to conduct a church-based weight-loss program for African-American women. *Diabetes Educator.* 2001;27(2): 231–237.

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