Nursing Research **fax #: 919/966-9736** **Due: 1/28/2005**

NURSING RESEARCH REVIEW FORM

1st Review

Manuscript #	2005/003
Manuscript title:	Psychometric evaluation of the cultural competence assessment instrument among health care providers
Manuscript type:	Regular
Number of text pgs.:	12
Number of figures:	2
Number of tables:	0
Reviewer:	Linda Hughes
Stat reviewer assigned?:	No -- do you recommend a stat reviewer?

Please evaluate the following with these choices: (1) adequate, (2) inadequate (describe in written review) or (3) not appropriate (describe in written review)

Problem statement: **2**
Attention to relevant literature**: 2**
Theoretical framework: **2**
Research design: **1**
Data analysis: **1**
Discussion of results: **2**
Organization: **2**
Writing style: **2**

Please rate the following topics 1-5 (with 5 being the highest rating):

Value of topic: **5**
Probable reader interest in topic: **5**
Importance of present contribution to nursing: **4**
Priority of topic for publication: **3**
Rank this manuscript for its value:**3**

Reviewer's Recommendation (please type "X" after your choice):

Accept without revisions
Accept with revisions
Maybe accept with revisions **X**
Do not accept

Comments for Editor only:

Please provide a comprehensive and integrated review of this manuscript.
Be sure to present a balanced view of the manuscript's strengths and weaknesses

Manuscript #2005-003

In this manuscript, data are reported from two studies conducted as a continuation of the psychometric evaluation of the Cultural Competence Assessment (CCA) instrument. Initial psychometric testing of the CCA has been reported in a previous publication. The instrument is designed to measure self-reported cultural competence among health care providers who represent a variety of disciplines, function in a variety of health care roles, and have differing educational backgrounds.

The topic of providing culturally competent care is important but the manuscript would be improved by stronger documentation of the significance of the problem. While the need for culturally competent care is argued, in particular through reference to the 2002 IOM report on unequal treatment and the Health People 2010 objectives, the underlying problem that resulted in a recognition of this need is not well documented. According to the manuscript, the importance of culturally competent care in the reduction of health disparities has been clearly articulated. However, there is no discussion of prior research in this area. For readers who are less familiar with this literature, it would be helpful to argue the significance of the topic through a description of the incidence and prevalence of health disparities in this country and summarize the findings from prior research that support a lack of culturally competent care as a factor contributing to health disparities. The authors provide a well-stated argument to support the need for reliable and valid assessment tools that can be used both for quality improvement purposes and to evaluate research-based interventions designed to enhance cultural sensitivity and culturally appropriate behaviors among health care providers.

The theoretical framework is identified as the Cultural Congruence Model, consisting of four constructs: cultural diversity (experience with diverse cultural groups), cultural awareness (knowledge), cultural sensitivity (attitudes), and cultural competence (behaviors). Four subscales were developed to measure each of these constructs although the cultural awareness and cultural sensitivity subscales were collapsed into one based on a prior factor analysis. Given that a description of the model is reported in a manuscript under review and not available to readers, it would be helpful to more fully describe the model in this manuscript. In particular, statements about the conceptual definitions of the key constructs in the model would be useful so logical adequacy in the approach used to operationalize these constructs can be better evaluated.

Cultural diversity is measured using a provider self-report of the number of cultural groups who have been cared for during the previous year. Cultural Awareness/Sensitivity (CAS) is measured using a summated rating scale. A Cultural Behaviors subscale (CCB), a summated rating scale, was developed to measure cultural competence although the authors seem to suggest later in the manuscript that scores on all three subscales – not just the Cultural Behaviors subscale --reflect cultural competence.

It would be helpful to clarify that the Cultural Diversity measure is an index (i.e., a direct rather than a proxy measure). In his monograph on scale development, DeVellis (1991) describes an index as consisting of items that represent “cause indicators” (items are a direct measure of the level of the construct) while scales consistent of items representing “effect indicators” (items for which the scores results from an underlying latent construct). The advantage of a direct report or index is that it is easy to construct and has inherent validity. The major concern with a direct report is stability over time. While the authors report test-retest reliability estimates for the CCA as a whole, the CAS, and the CCB, the test-retest reliability estimate for the Cultural Diversity measure is not reported. Direct reports are not usually evaluated for internal consistency reliability or factorial validity (since items do not provide proxy measurement of a latent construct). It is not clear if scores on the Cultural Diversity measure were included when the alpha for the overall CCA was reported or if the alpha was calculated only using scores on the CAS and CCB subscales. Similarly, it is not clear if scores on the Cultural Diversity measure were

included in the factor analysis. The reader is told that the factor analysis was conducted on 38 items. The CAS had 11 items and the CCB had 17 items so does this mean that the remaining 10 items in the factor analysis were the dichotomously scored responses about the number of cultural groups who have been cared for by a provider?

The report of the factor analysis would be stronger by including a discussion of the adequacy with which the factor solution reproduced the observed correlations. The number of residual correlations that exceed .10 gives a better indication of whether or not additional factors are unaccounted for by the solution. This would be especially important since six factors were originally extracted but then were reduced to two. A table reporting the factor analysis is needed. The table should include the variables, number of cases, number of factors, factor loadings of each variable on each factors, communalities, eigenvalue of each factor, and percent of variance explained by each factor. Since structural equation modeling is commonly used to determine factor invariance across different groups, it would be helpful to include a reference that supports the use of visual inspection as an approach to informal evaluation of factor comparability and identifies the components of the factor analysis that are usually inspected.

The findings from the studies reported in this manuscript will make a useful contribution to the literature. However, the manuscript needs substantial revision in terms of the discussion of the significance of the problem, summary of the literature, and description of the theoretical framework. The procedures for data collection are well described and appropriate for the study purposes. The authors may want to use a table to report demographic characteristics of the samples. The statistical procedures used to evaluate the measures were appropriate and data interpretations were consistent with the statistics reported. It would be helpful to include additional headings or subheadings that better organize the content. For example, the individual coefficient alpha for the CAS and the CCB are reported in the paragraph discussing the findings from the factor analysis rather than in the paragraph reporting the coefficient alpha for the overall tool. Also, it is hard to stay clear on the number of items that are being evaluated It appears that the initial factor analysis was done with an 8-item CAS but the second factor analysis was done using an 11-item CAS. No information is given to account for the extra 3 items. Also the reader is told on page 6 that the CCA is a 25-item measure but later told that 38 items were included in the factor analysis reported in this manuscript.

I have some comments about several statements made in the manuscript. The reader is told that item to total correlations are significant. I am unaware that significance testing is usually done in the context of reliability assessment. In the discussion, it is stated that the alpha indicates that the items are a reliable indicator of cultural competence. Actually, the alpha doesn’t say anything about what is being measured. It is stated in the discussion that the factor structures were not significantly different in the two samples compared in this study. Actually, no analyses were conducted to evaluate for significant differences in the two factor structures. While it can be said they were comparable, it is inappropriate to say that they did not significantly differ. Also the discussion of whether or not the CCA measures a concept that is a trait or state is confusing. First the reader is told that the test-retest reliability suggests that the CCA is measuring a stable construct, and then the reader is told that the construct may be a state rather than a trait since it can be modified through intervention. Finally, convergent validity of the CCA is assessed using a single item measure of overall cultural competence. It should be noted that both the CCA and the single item measure are self-reports and, therefore, vulnerable to common methods variance which could inflate the magnitude of the correlation.

Overall, the authors are to be commended for conducting several studies that have provided a thoughtful evaluation of the psychometric properties of this instrument. With revisions to the text, the manuscript would make a useful contribution to the literature and be of interest to the health care community.