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ECOCULTURAL RESEARCH

A Mental Health Researchers' Guide to the Study of Race, Ethnicity & Culture

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PREFACE

This toolkit, like any veritable toolkit, can always be improved. It should be considered tentative, a working version subject to alteration, amendment, or any other form of improvement. We especially wish to emphasize that the measures we list later for potential use in ethnic and cultural studies are only a beginning point. The authors and the distributors of this toolkit welcome suggestions from readers, especially those who have used the scales or techniques described, or others they would like to recommend, in their own work.

Also, we need to note that the ideas in this toolkit have come from many sources, more than we can acknowledge. This document should not be taken as a claim by us to originality. We are grateful in every respect to the many previous writers who have influenced our thinking, sometimes so profoundly that we are no longer aware of the specific origins of the ideas, so thoroughly have we assimilated them.

INTRODUCTION

This toolkit provides a step by step guide for conceptualizing, measuring and interpreting differences between North American ethnic groups in order to create effective interventions, evaluations, and policies. The following chapters detail the ways in which ethnic differences have been elaborated, the next steps in investigating these differences, and possible combinations of variables that might illuminate the reasons for these differences.

Although the phrase *ethnocultural* is often used to describe research into ethnic or cultural factors, this conjunction of terms confounds the meaning of ethnicity and culture. We prefer the term *ecocultural* because this more accurately describes the broad array of ecological and cultural variables that are likely to be needed to provide a causal explanation for ethnic differences in mental health service uptake and outcomes (Gallimore, 1996; Gallimore, Goldenberg, & Weisner, 1994; Nihira & Weisner, 1994).

Ecological variables represent the social or physical resources and constraints in an individual's environment. Social resources may be things like a close-knit community, available family members, functional literacy; social constraints may be isolation, loss of privacy, discrimination. Physical resources may be stable employment, reliable transportation, adequate housing; physical constraints may be poverty, toxic environmental exposures, occupational hazards. Many of the effects on mental health service outcomes that are ascribed to race, ethnicity, or culture are likely to be effects of ecology, or of some interaction of the other elements with ecology.

> Dr. King recognized the role of ecological variables in contributing to criminal behavior and the pivotal role policymakers can play in reducing such behavior since "they create discrimination; they structured slums; and they perpetuate unemployment, ignorance and poverty."
>
> (From Martin Luther King Jr.'s speech to the APA annual convention, Sept. 1967, reprinted in the APA Monitor, vol 30, number 1, pg 27).

To more fully understand the processes that underlie the ethnic differences investigators have found in mental health services research, we must get beyond using simple categorical measures of race and ethnicity to measure the associated ecocultural variables that are likely to have causal force. This does not mean that race and ethnicity are not important. As Cooper (1986) points out "Races *do* exist. They are a powerful force in determining health, not for biological but for social reasons" (pg. 113-114).

Our society is not blind to the color of a person's skin nor to other outward characteristics of race or ethnicity. Certainly in the political arena, the use of variables such as ethnicity and sex can be very important – they can be used to lobby for access to resources and to rally people to action. But in research, such categorical variables can only alert us to group differences; they cannot explain why these differences exist or how to remedy them. We must be clear about our goals when we select the variables we will use in our studies.

The following sections explore the benefits of using an ecocultural approach in mental health services research.

The next chapters include:

- factors and effects for which race, ethnicity and acculturation have served as stand-ins, or *proxies*,
- sample connections between factors, behaviors and theory,
- the theorized mechanisms involved in differences across groups, and
- proposed scales to capture theorized mechanisms and causal factors.

We hope this toolkit serves as a useful guide for increasing clarification and accuracy in the use of ecocultural variables affecting mental health services research.

AIMS OF THE TOOLKIT

This book is meant to be a tool. It was developed to assist in conceptualizing and studying ecocultural variables. It is meant as a template and not as a rigid set of rules. Ultimately, it should foster the growth of your research skills as you pursue an understanding of the role of culturally relevant variables in applied mental health service settings. We hope to provide suggestions for techniques that will help you to think critically about how best to meet consumer needs. We encourage you to be flexible in your thinking. If we succeed, you will approach the topics and areas that you value with a more thorough understanding of the dynamic processes that link cultural variables together.

Aims of Toolkit:

1) Discuss important conceptual and methodological issues in ecocultural research
2) Provide a guide for conceptualizing how ecocultural and related variables may affect patterns of mental disorder and disability, service needs, service use, and mental health outcomes
3) Provide a guide for conceptualizing how ecocultural and related variables are related to treatment and service system factors, including cultural competency of treatments
4) Review instruments to measure ecocultural and related variables

Chapter 1: A MULTIVARIATE APPROACH TO ISSUES IN ECOCULTURAL RESEARCH

Health service researchers, including those studying mental health services, routinely employ the concepts of race and ethnicity as independent variables in studying demand for services, patient adherence to treatment, and health outcome. Comprehensive reviews of three journals (the *American Journal of Epidemiology*, 1921-1990; *American Journal of Public Health*, 1980-1989; and *Health Services Research*, 1966-1990) reveal that 50-65% of the studies contained references to the constructs of race or ethnicity (Jones, LaVeist, & Lillie-Blanton, 1991; Williams, 1994; Ahdieh & Hahn, 1996). Most of these studies appear to rely very heavily, if not exclusively, on self-reported race or ethnicity, measured by one question.

By conceptualizing and using race, ethnicity, and other sociodemographic variables such as sex, education and rurality, as discrete categorical variables, we are employing what Bronfenbrenner (1986) has labeled the *social address* of the subject. Like street addresses, social addresses provide specific information: they tell us that differences exist between groups of people and direct our attention to them. In this way, they may serve a legitimate purpose as surveillance variables for monitoring the resources and opportunities made available to certain groups, particularly groups like women or minorities that have been traditionally underserved or discriminated against in certain arenas.

> Using race and ethnicity as surveillance variables can be important, because discrimination continues to persist in many areas. Using individuals as equal as possible in all respects except race to pose as applicants, a 1991 employment audit found that white testers were about 10% more likely to be invited for job interviews than black testers. A 1989 estate agent audit found 13% of black testers posing as house buyers were offered assistance in mortgage financing, compared with 24% of white testers.
>
> (The Economist, 6 June, 1998, p. 76)..

Although the social address approach can be useful, we probably have already reached the limit of its usefulness in studying mental health. Research has clearly shown ethnic group differences in mental illness symptoms (Goleman, 1995; Hulme, 1996; Jones-Webb, Wagenaar & Finngan, 1997; Snowden, 1993; Okazaki, 1997; Wohi, Lesser, & Smith, 1997) as well as patterns of onset (Good & Kleinman, 1985; Matsuoka & Benson, 1996), risk (Nesdale, Rooney, & Smith,1997), service use (Akutsu, Snowden, & Organista, 1996; Human & Wasem, 1991; Scheffler & Miller, 1991; Snowden & Cheung, 1990) and outcomes (Kaufman et al., 1997; Vega, 1991). We now need to explicate these differences systematically: why do they exist? what can we do to intervene?

A study of differences between black and white schizophrenic patients in symptomatology displayed during their hospitalizations showed fewer symptoms recorded for black patients than for white ones. The same difference was found, however, between lower-class and middle-class patients. The investigators considered several hypotheses and rejected the idea that black patients might have been "less sick." Their ultimate preference was for the hypothesis that white, well-educated therapists tended to have a lower level of social involvement with black and lower class patients. (It seems almost quaint these days to read about "Negro individuals," a label that was common in 1965, and that was used in the article referred to here. Of interest, too, is that the article in question was written by two persons with Spanish surnames who, at that time, might not even have recognized themselves as members of any notable ethnic group).

(de Hoyos, A., and de Hoyos, G. (1965). Symptomatology differentials between Negro and White schizophrenics. The International Journal of Social Psychiatry, 11, 245-255).

By continuing to define individuals merely by assigning them a social address of Black, Hispanic, American Indian, Asian, Pacific Islander, White or whatnot, we are left with a "black box" model of the effect of ethnicity on the outcomes of interest. We can only speculate on why we have found the differences we have discovered.

What we propose instead is to examine explicitly the processes that researchers, clinicians, and administrators believe to be creating these ethnic group differences. In doing so, we will discover that there is not some single force at play, but rather a multitude of causes and effects. A single variable, then, cannot be expected to stand in for these causes. Rather, we need a multivariate conception of how these group differences come about and what they might mean.

A recent Education Department study stated that school dropout rates for Hispanics cannot be accounted for merely by ethnic, acculturation, or economic variables (i.e., length of time in the United States, English proficiency, or social class). Instead, researchers have attributed high dropout rates to flaws in educational institutions' capacity to provide adequate services: "…poor school conditions, lack of teachers with adequate training and language abilities, lowered academic expectations and unresponsive school bureaucracies. (President's Advisory Commission on Educational Excellence for Hispanic Americans, 1996)."

In the sections to follow we will examine why the use of a single race or ethnicity question as an independent variable is not sufficient for providing useful causal explanations for potential ethnic group differences in patterns of mental disorder and disability, service needs, service use, and mental health outcomes. We will consider why, in fact, it may actually serve to obfuscate the steps necessary to reduce these differences through effective interventions. We will encourage you, instead, to think more carefully about what you almost certainly already suspect to be the factors influencing the ethnic group differences you see in your daily work. After all, one of the most straightforward ways to enhance our studies is to understand better the processes that we believe to be at work within the areas of need and the interventions we are examining.

"About 20 years ago, when asked in a meeting what can be done in observational studies to clarify the step from association to causation, Sir Ronald Fisher replied: "Make your theories elaborate." The reply puzzled me at first, since by Occam's razor, the advice usually given is to make theories as simple as is consistent with known data. What Sir Ronald meant, as subsequent discussion showed, was that when constructing a causal hypothesis one should envisage as many different consequences of its truth as possible, and plan observational studies to discover whether each of these consequences is found to hold." (Cochran, 1965)

Definitions of race, ethnicity and culture

One of the first barriers to more clearly understanding studies comparing ethnic groups is that the terms "race," "ethnicity," and "culture" are often used interchangeably or in combination, without explicit reference to how they are measured or are to be interpreted. Here, we will outline definitions of these variables as they will be used in this toolkit.

Race: A biological grouping within the human species with shared physical characteristics and genetic material.

Ethnicity: An individual's identification as a member of a social group with a common background, usually racial, national, tribal, religious, or linguistic.

Culture: A framework for understanding social interactions created by learned patterns of behavior, beliefs and values shared by individuals in a particular social group.

Ecocultural: A variable grouping that encompass social and habitat ecology, as well as cultural variables.

Race is assumed to be a biological variable of genetic origin. An assumption driving the use of race as a variable in so many studies is the implicit belief that racial differences in the outcome, incidence, or severity of medical conditions, including mental health disorders, are somehow genetically determined (Dressler, 1993; Kaufman, 1997; Osborne & Feit, 1992; Vega & Rumbaut, 1991; Witzig, 1996). Undoubtedly, genetic make-up accounts for some of the variability in individuals' mental health status. However, the scientific basis for the overarching view that the concept of race represents some fixed, biogenetic concept is ambiguous at best (e.g. Cavalli-Sforza, Menozzi, & Piazza, 1994; Williams, Lavizzo-Mourey, & Warren, 1994; Jones, et al., 1991; Cooper & David, 1986; Latter, 1980; Montagu, 1962; Engel, Shamoon, Basch, Zonszein, & Wylie-Rosett, 1995).

We do not have to take any stance one way or the other about the ultimate scientific legitimacy of the idea of race, but we should realize that race as we measure it, by a self-reported or third-party-identified single question, is unlikely to have the ability to

differentiate people in a substantially useful genetic way (Helms & Talleyrand, 1997; Yee, et al., 1993).

> "Human variation is very, very real. But race, as a way of organizing [what we know about that variation], is incredibly simplified and bastardized."
>
> Alan Goodman, Dean of Natural Sciences, Hampshire College (Quoted in *Newsweek*, 13 February, 95, pg. 67)

Although there may be times that we are interested in specific biological pathways in our studies, very little research in mental health services is developed to such an extent as to be able to suggest specific biological mechanisms. In fields such as ethnopsychopharmocology (e.g., Herrerra, 1997; Smith & Mendoza, 1996), which examines racial and ethnic group differences in response to psychotropic medications, there is controversy about how much of the effect can be attributed directly to biological mechanisms and how much to ecocultural factors such as compliance, differential placebo effects, stress, diet, environmental exposure, and subjective response (Lin, Poland, & Anderson, 1995). Even if we do have biological mechanisms in mind, race will only be loosely correlated with them (e.g. Kleinman, 1987). Consequently, using race instead of measuring the mechanism directly introduces measurement error and clouds the interpretation of the results.

> Dark-skinned racial groups tend to have denser bones than those of Caucasions. However, this may only be related indirectly to race, per se, and more to a link with vitamin D receptors, which seem to be related to pigmentation. In fact, loss of pigmentation in hair, as seen in those who went prematurely gray, seems to be a marker for bone thinning (Science, vol. 266, 21 October, 1994, p 366). In assessing risk for osteoporosis, it would be better to measure direct markers of the effectiveness of vitamin D receptors rather than relying on self-reported race.

In fact, many authors argue that using the term *race* in this imprecise way has no real use and may even be instrumental in perpetuating racial prejudices (American Anthropology Association, 1997; Kaufmann, 1997; Phinney, 1996; Williams, Lavizzo-Mourey, & Warren, 1987; Yee, et al. 1993; Zuckerman, 1990). That is, we may unjustifiably be reifying unspecified biological effects as racially-determined causes of general and mental health problems (White-Means, 1995; Williams, Lavizzo-Mourey, Warren, 1994; Wilkinson and King, 1987; Osborne & Feit, 1992;).

Whether or not race has important genetic implications for mental health, it is not consistently reported across studies. Assignment to racial group--whether by self-identification, by third-party identification, or by government protocol--has been shown to change over time (Hahn, Mulinare, & Teutsch, 1992; LaVeist, 1994; Sheldon & Parker, 1992). In fact, nearly every US census since 1790 has measured race differently from previous ones (Evinger, 1995; Wright, 1994), a convention that will continue in

"The notion of fixed, enduring, bounded ethnicity is positively quaint from the perspective of modern population biology…Nevertheless, it is endorsed and reified by the type of thinking institutionalized in public policy by our own government. If you are inclined to be skeptical, look sometime at the absurd racial and ethnic categories concocted by the U.S. census and replicated on application forms throughout the land."

(from a paleoanthropoligist: Clark, G.A. (1999). NAGPRA, science, and the demon-haunted world. Skeptical Inquirer, 23 (3), 44-48.)

2000. Furthermore, race and ethnicity seem to be substantially confounded in many people's conceptions of the terms (Hahn, 1992): People claim to be "multiracial" on the basis of having multiple ethnicities, e.g., German and Irish (McKay and de la Puente, 1995), and over 97% of the 10 million people who reported themselves as "other race" on the 1990 Census were Hispanic (US Bureau of Census, 1992). Whatever it is we are measuring when we inquire about race in the typical manner of asking about it, we cannot be sure of what we are getting.

Mental health researchers are no more immune than other people to such confounding, making statements such as "Race variables are our primary focus. We included whites, blacks and Hispanics in our study population." (Scheffler & Brown, 1989).

Regardless of the implications of racial genotype for mental health services research, we often are interested in the study of the impact of racial phenotype (e.g. skin color or facial features) as it plays out in prejudice and discrimination and the implications these may have for mental health services. Even if we do wish to assert that race as a biogenetic entity has a role to play in some mental health outcomes, we also should ask how much of the variance in that outcome can be attributed to other, more modifiable factors and how much, residually, to the biology of race. To do this, we must identify and measure those other factors, and measure them well. As LaVeist (1994) points out, "race is often conceptualized as a proxy for other (not measured) variables that are known or believed to correlate with race" (p. 7). We discuss the serious limitations of using proxy variables in this way in the section titled *Race and Ethnicity as Proxy Variables*.

The previously mentioned study of race differences in symptoms associated with schizophrenia illustrates the potential importance of race as a variable in the eyes of the perceiver. "Knowing" that a person is of a particular race or ethnic background may bias perceptions of that person in very important ways.

A recent newsletter from the National Abandoned Infants Assistance Resource Center observed that:

In general, kinship foster care is used more often as a formal placement option for African American children. In 1996, African American children were the largest group of children in kinship homes in California, for instance, while Caucasian children were the largest group of children in foster homes, faster family agency homes, group homes, and other placements. Like African American children, Latino children were more likely than Caucasian children to be placed in kinship homes.

Now we do not believe that caseworkers note that a child is black and therefore ought to be in a kinship home and that another child is Caucasian and should be in a foster home. We suspect that, instead, kinship homes are more available for black children, undoubtedly for cultural reasons. The information provided in the newsletter does not help us at all to understand the phenomena of placement of abandoned children and why some end up with relatives and some in foster homes.

We note also that the newsletter confuses race and ethnic issues, let alone cultural ones, by distinguishing between African American, Caucasian, and Latino groups.

Ethnicity denotes identification as a member of a social group, usually of national, geographic, religious or linguistic origin (Phinney, 1996; Waters & Eschbach, 1995). Like race, it is generally assessed with a single question, either by self-report (ethnic identity) or by third-party identification (ethnic labeling). Some studies even rely exclusively on identification by surname (Lauderdale, Jacobsen, Furner, Levy, Brody, & Goldberg, 1998). Unlike race, it is not a biological variable in any of its manifestations, but rather a social construction. The American Anthropological Association has suggested in their position paper on race, that the term *ethnicity* replace that of *race* when a group label is used (if genetic factors are not being explicitly studied), because it is more obviously social in nature and lacks the biological implications of race (American Anthropological Association, 1997).

Potential influences on the choice of ethnic identity include: labels given to children by parents, popularity of group membership, age, knowledge about ancestors, socioeconomic status, education, structure of the family, surname, effects of other people's identification, intermarriage, name changes, physical appearance and rankings of ethnic groups (Waters, 1990).

Individuals can self-label in different ways in different situations, with their choice of identifiers changing over time and situations (Evinger, 1995; Hahn, Mulinare, & Teutsch, 1992; LaVeist, 1994; Sheldon & Parker, 1992; Waters, 1990; Zimmerman, et al., 1994). The labels they choose, though, may be constrained by societal identification, especially for people belonging to ethnic groups of color (Phinney, 1996). Furthermore, it is important to recognize that ethnicity may be assigned as well as adopted. Thus, a person may be regarded by others as a member of some ethnic group even though the person may not at all so regard him or herself.

A recent article in US News & World Report (11 May, 1998) was entitled *"Hispanics" don't exist*. It points out the inability of a single label to capture the diversity among people who come (or whose forebears came) from two dozen countries. And if Hispanics don't exist, than neither do Asian-Americans (from many diverse countries, without a common language), American Indians (from over 400 different tribes), African-Americans (many of whom have ancestors from the Caribbean), Whites, or any other single, homogeneous group.

In addition, individuals may have multiple ethnic identities, or the labels available to them may have several different connotations (e.g. Larkey, Hecht, and Martin, 1993; Trevino, 1986). And although the term ethnicity typically implies national, geographic, religious or linguistic affiliations, it is important to recognize that ethnicity as a concept can be extended to cover other salient social identifications. For example, Page (1993) notes that deaf Hispanics in New Mexico appear to have a much stronger view of themselves as deaf than as Hispanic.

In our own work with male veterans, it is veteran identity rather than traditional ethnic identity (Hispanicity) that seems to be the more important "ethnic" identification. For example, nominally Hispanic veterans appeared to be much more concerned that the doctors taking care of them are not themselves veterans than that they are not Hispanic.

(Walsh, M. (1998). *Cultural Factors in Adaptation to Chronic Illness*. Presented at the American Evaluation Association Annual Meeting, Nov, 1998. Chicago, IL.)

Other social identifiers that may be pronounced in different contexts are things such as mental health service consumer status, marital status, parental status, school or university affiliation, and occupation. When we use ethnic group membership to identify individuals, we should be explicit about what this identifier is being used to mean in the context of the study and why it is likely to be more salient or more important than the other possible identifiers that people select or are assigned to.

When forced to choose amongst standard ethnic categories, is it so surprising that a "curiously large percentage" identify themselves as 'other,' according to the Washington Post?

(National Weekly Edition, August 28-September 3, 1995; p. 37)

The term ethnicity is often used to indicate the strength of subjective ethnic identity, rather than merely group membership. As such, it is not a categorical variable, but rather involves dimensions such as preference for the group, a sense of belonging, extent of positive evaluation, ethnic interest and knowledge, and involvement in activities associated with the group (Phinney, 1996, p. 923). It may, of course, be multidimensional, e.g., so that a person might have a strong preference for a group without necessarily having a strong sense of belonging to it. We will discuss the implications of the common practice of using a single item to measure these various dimensions in the section of Chapter 4 titled *Underestimating Effects of Underlying Variables*.

Asking about ethnicity may be useful in some situations, for instance, if we believe that the subjective sense of belonging to a particular ethnic group is important in determining someone's willingness to attend a particular clinic, or to establish rapport with a therapist, or to continue in treatment. In addition, ethnicity is often very important for political purposes as it enables the establishing of bonds between persons that are useful for achieving

power and resources. However, individuals within ethnic groups are not homogeneous in their beliefs, values, experiences, or behaviors (Pelto & Pelto, 1978; Phinney, 1996; Whiting, 1976). If these are the variables we believe to have a substantial causal role in our studies, then we should be explicit about that and measure them more directly.

Cultural variables represent the shared values, beliefs, norms, attitudes and behaviors of an ethnic or other closely-knit group (e.g., individualism/collectivism; family relations; attitudes towards mental disorder, etc.). The anthropological view is that culture evolves over time in response to adaptive challenges. One result of this evolutionary process is beliefs and practices that help us adapt to persistent as well as changing circumstances. These beliefs and practices are organized as cultural models of how things work, what is ideal, and which beliefs and practices are proper and help individuals or groups survive and prosper (LeVine, 1977).

Cultural models include taken-for-granted social constructions of the world, widely shared by the members of a society, shaping their understanding of that world and their behavior in it (D'Andrade & Strauss, 1992). What activities are carried out, why they are valued, who should participate, and the rules of interaction are coded into our cultural models (Gallimore, 1996; Gallimore, Goldenberg, & Weisner, 1994). Investigators often assume that cultural characteristics and models are the explanatory force behind ethnic differences in their empirical or clinical results, but these characteristics are rarely directly assessed (Alvidrez, Azocar, & Miranda, 1996; Betancourt & Lopez, 1993; Phinney, 1996).

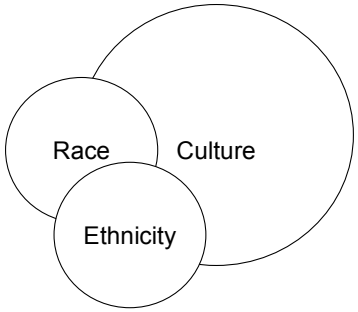
In a study of disability and need for long term care in the elderly, Sharon Tennstedt, Ph.D. (Principal Investigator on the National Institute on Aging funded Springfield Elder Project) reported that ethnicity was found to be more important than socio-economic status in explaining group differences. However, ethnicity was interpreted as cultural preferences and practices, in particular a preference for care provided by family members over institutions.

(Network, Newsletter of the New England Research Institutes, Spring/1998, p. 5).

Acculturation scales are sometimes used to represent culture, but these tend to be focused on behavioral indicators of involvement with other ethnic group members and more superficial indicators of retention of the reported culture of origin (language, food preference, television viewing) rather than on cultural values and norms (Betancort & Lopez, 1993; Phinney, 1996;). These sorts of scales are more a measure of ethnic identity than of culture (e.g. Phinney, 1990).

Studies that have explicitly examined cultural values such as collectivism, traditional sex roles, and respect for authority have found that the cultural characteristics studied do not always differentiate between ethnic groups (Feldman, Mont-Reynaud, & Rosenthal, 1992; Phinney, 1996). This lack of differentiation is not surprising since there are few differences in cultural characteristics between ethnic groups that do not also exist within ethnic groups (Sechrest, 1977). Race, ethnicity, and culture are not synonymous, and we should not expect indicators of any one of those concepts to be perfectly, or even necessarily highly, correlated with indicators of another (see Figure 1).

Figure 1: Conceptual Model of Relationship amongst Race, Ethnicity and Culture



If we expect cultural characteristics to play an important role in determining health services outcomes, then we should have an idea about how it is that these cultural characteristics would have an effect. Culture is important because it affects definitions of mental health conditions, conceptions of quality of services, ideas about functional status and the like. It is less clear that culture is the cause if its effects are largely because of a confounding with poverty or place of residence.

Lopez (1997) described a case in which, as a therapist, he attempted to aid a distressed couple in increasing their communication of both positive and negative affect. The husband reacted strongly against the therapist's suggestion that he may have been hurt in the relationship and should express that, stating that his wife and daughters had tried to make him a *mandilon* [wimp], but he was never going to succumb to their wishes (p. 583). Cultural norms of the role of and expectations for men had an impact here in defining what an appropriate target of therapy might be. Lopez suggests that communication skill building techniques might have been structured to teach expressing negative sentiments in indirect or subtle ways.

As we noted in the introduction, **ecological variables** represent the social or physical resources and constraints in an individual's environment. The following table lists ecocultural variables that we have identified in the literature that are asserted as possible influences on mental health service use and outcome. This list of ecocultural features is a beginning place for initiating a focus on quantifying their effects, but only a beginning place.

Table 1: Ecocultural Elements and Examples

Acculturation	Availability of coping strategies, comfort with ethnic and cultural differences, communication skills, perspective taking
Age-related issues	Mobility, functional status, assistance needed
Attitudes towards mental health and illness	Values, beliefs, stigma, preferences for treatment and recovery, trust/mistrust of health care providers
Individual vs. collectivist orientation	Social learning vs. private learning, self/other benefit
Communication issues	Provider credibility, message meanings, persuasion, delivery (i.e. aggressive, instrumental, or compliance-gaining), disclosure norms
Education	Years of school, literacy
Group Identification	Ethnic (or national) self-identity, country of origin, country of origin of parent, contact with family or friends in outside countries, skin color

Table 2, continued

Gender-related Issues	Relationship roles, parental roles (child care and elder care), employment-related factors, sex role expectations, risk factors attributable to the devalued status of women (sexual abuse, rape, domestic violence), sexual orientation
Genetic Differences	Metabolism, drug interactions, genetic makeup, hormone levels
Health Behaviors	Health practices (i.e. smoking, blood pressure, body-mass index, diabetes, alcohol use, and cholesterol level), health care preventative measures, previous diagnosed illness, family history
Language	Languages spoken, languages read, language preferred, music, television, language one thinks in, language one writes in, language in which one writes better
Material Status	Diet, clothing, housing, home facilities, environment, location, work condition and activities, transportation, public/private insurance, recipient of welfare support, layoffs, earnings unemployment, family income, experience and perceived discrimination
Neighborhood	Trash, resources available, crime, environmental exposures, rural vs. urban
Refugee Status	Post-migratory status (accommodation, isolation, employment, education, downward economic mobility, retention of ethnic identity) Pre-migratory status (trauma, death of loved ones, rape, persecution, torture, perilous travel detainment)
Social Support/Social Network	Religious affiliation and participation, marital status, family roles, family size, family activities, familism
Minority Status	Trust, experienced and perceived discrimination, stressful life events, residential segregation occupational status, role in social institutions

The use of *risk adjustment* is one technique researchers have used to attempt to control for these types of variables that may potentially differ between groups. Although statistical adjustment for differences can be a useful approach, we will illustrate that in order to be used effectively, it must be used thoughtfully (see *Problems with Risk Adjustment Approaches* section in Chapter 4).

Risk adjustment: Statistically controlling for behaviors or conditions which, based on previous research or theory, are thought to directly influence susceptibility to a specific health or mental health problem.

For example, Rogers (1992) studied black-white difference in mortality with data set combining the 1986 National Health Interview Survey and 1986 National Mortality Followback Survey (Suinn, Richard-Figueroa, Lew, & Vigil, 1987). Without controlling for other factors, the odds ratios revealed that African-Americans were 48% more likely than whites to die. After controlling for age, sex, marital status, family size and income, the black-white difference disappeared.

Risk adjustment has also been used by economists to illustrate persistent discrimination in such areas as mortgage lending. One study showed that loan denial rates for blacks were eight percentage points higher than those for whites, even after factoring out a number of factors that affected the risk of default (The Economist, 6 June, 1998)

Race and Ethnicity as Proxy Variables

As we argue, the terms race, ethnicity, and culture should not be used interchangeably. They each have a distinct meaning, and in order to be interpretable, our studies should be explicit about which variable(s) we are actually intending to study. To date, studies in mental health research have usually **not** been explicit, but have tended to confound one type of variable with another.

Furthermore, when the terms race or ethnicity have been used in studies looking at such things as access to services, compliance with treatment, attrition from programs, or mental health outcomes, it has rarely been biology or even subjective group membership that the investigators have believed to be important in causing those outcomes. Rather, the true variables of interest tend to be those that are assumed to correlate with race or ethnicity. Usually those other variables are ecocultural ones like perceived stigma of mental disorder, availability of other de facto mental health services (Fox, Merwin & Blank, 1995), insurance status, social class, (Fairchild, Yee, Wyatt, & Weizman, 1995), beliefs about treatment efficacy, trust in providers, etc. Race and ethnicity are almost always used as proxy variables for these other, underlying variables, many of which are illustrated in Table 1.

Proxy variable: a measured variable that stands for a set of other, not explicitly measured, variables.

"Using one variable as an "index" or "indirect measure" for one or more other variables is among the most widespread fallacious practices that mitigates against progress in developing theory and establishing laws in social science." (Guttman, 1977)

Race and ethnicity are often used in research because they are presumably more easily measured and so easy to “throw in” our studies. But even so, they are not measured without error, as we have already noted. Furthermore, to the extent that race or ethnicity are not perfect predictors of the underlying variables of interest, and they are often not even good ones, they introduce error and systematic biases into researchers’ conclusions about the role of these variables. This imprecision in measurement is rarely acknowledged, but it exacts a large price in the interpretability of the findings of our studies. If we do not know what we are measuring going into a study, we are not likely to be much better coming out of it.

Examples of problems in measuring race and ethnicity:

Williams (1996) found that interviewers had classified 80% of participants as "white" who had self-identified as "other".

Hahn discovered that 30% of the infants described as "Hispanic" at birth had a different ethnic identifier assigned at death (Hahn et al., 1992).

Although a few authors have begun to address the conceptual issue of race and ethnicity as proxy measures for many underlying constructs (e.g. LaVeist, 1994; Fairchild et al., 1995; Okasaki & Sue, 1995; Phinney, 1996), no one has explicitly discussed the methodologic and measurement issues of proxy variables. One of the things we will show is that the measurement error that proxy variables introduce into our studies is a serious threat to the conclusions that we can usefully draw from those studies.

SUMMARY

- Race, ethnicity, and culture are distinct concepts and should not be used interchangeably.
- Race and ethnicity are often used as proxy variables for underlying ecocultural variables.

Chapter 2: A TEMPLATE FOR CONDUCTING AND REPORTING ECOCULTURAL RESEARCH

The following section outlines some of the steps to go through in conceptualizing, designing, carrying out and reporting ecocultural research. We cover the processes in more detail later in the toolkit.

Why is the study targeting ethnic groups or ethnic group differences at all?

- One possibility is that a racial or ethnic designation may be being used as a surveillance variable in order to identify potential problem areas or instances of discrimination.
- A second possibility is that racial and ethnic designations are used because of an interest in the ways in which social or political standing may affect variables of interest.
- A third possibility is that such designation may be intended as a proxy for some ecocultural factor.

Why would one think that ethnic or cultural factors are likely to be important in studying the issue at hand?

I. THEORY

A. Identify a theoretical justification for the study

1. Consider potential sources of theory: previous research literature, implicit theory of program staff, consumers

B. Identify the components of a causal model

1. Causes
   - i) Identify which variables might be proxies for more complex variables
   - ii) Define variables that are believed to be the ones underlying proxy variables
2. Mechanisms
   - i) Mediators
     - a) Identify the process variables, the variables that "carry" the causal power to produce effects
   - ii) Moderators
     - a) Identify the variables that interact with causal variables so that the direction and/or strength of the results depend on whether they are observed in one category of people or another
3. Effects
   - i) Proximal effects are those that occur in reasonably close temporal proximity to their causes
   - ii) Distal effects are those that occur only in the long run, and they may or may not be consistent with proximal effects

C. Develop a logic model to illustrate the relations amongst these variables

II. MEASUREMENT AND DESIGN

A. Consider ways of incorporating multiple measures of variables

1. Multiple measures of same construct
   - i) Multiple items within measures or scales
   - ii) Multiple scales for the same construct
2. Multiple raters
3. Multiple timepoints
4. Multiple situations or occasions of measurement

B. Consider threats to validity

1. Construct validity
2. Internal validity
3. External validity
4. Statistical conclusion validity

C. Consider issues of cultural equivalence

1. What provisions have been made to ensure language issues have been addressed?
2. What provisions have been made to ensure conceptual equivalence across cultures?
3. What provisions have been made to include consumers in the community under study?

III. DATA COLLECTION

A. What kinds of data are to be collected?
1. Are self-report data requested?
2. Are instruments appropriately translated?
i) Have potential language, idiom, literacy or experiential barriers been considered?
3. Are observations to be made?
i) Are raters appropriately trained and sensitive to relevant cultural factors?
4. Has the coding system been devised and checked for feasibility, equivalency and completeness?
5. Are interviews to be done?
i) Are interviewers appropriately trained and sensitive to relevant cultural factors?

B. Can problems of reactivity of data collection methods be kept to a minimum?

C. Who will be involved in data collection?
1. What, if any, special qualifications will be required in order to collect the data? Will it be possible to document the existence of those qualifications?
2. Will training be required to collect the data? If so,
i) Who will provide the training?
ii) How will adequacy of the training be documented?
iii) If all data are to be collected by the investigator, will it be possible to document the investigator's qualifications for the task?
iv) Is it possible to check accuracy of data with persons who were in important ways participants in the study?

IV. DEVISE OR DOCUMENT INTERVENTION

A. Strength of treatment

B. Integrity of treatment

V. ANALYSIS OF DATA

A. If the study is qualitative, is a specific qualitative method being followed?

B. If quantitative analyses are being employed, has explicit attention been paid to their suitability for the data available?
1. Path analysis techniques
2. Hierarchical modelling
3. Longitudinal

VI. DATA INTERPRETATION

A. Is there a possibility for bias in interpretation that might make conclusions easy to challenge?
1. If yes, what will be done in order to guard against bias?
2. If yes, would there be any potential value in having multiple interpreters of the data?

B. What provisions are made for checking the accuracy of interpretations with persons who were in important ways objects of the study?

VII. PRESENTING THE RESULTS

A. Consider very carefully the purpose(s) of the study and in light of that the nature and level of detail to be presented.
1. Remember that the force of your research will be lost if no one reads it: think of the reader burden.

B. State the purpose of your study clearly and concisely.
1. Indicate the general reason for presenting the ecocultural study.

2. Begin by summarizing the argument you wish to support by means of the study.
3. Provide the background for the study.
   i) What is the theory that underlies the study?
   ii) Summarize the supporting literature pertinent to the study.
4. Review the overall strategy for developing the ecocultural study, e.g. approach taken.
5. Describe the methodology for the study.
   i) Sample and variable selection
   ii) Methods of data collection
   iii) Methods of data analysis
   iv) Buttress all methodological decisions with references to supporting literature when that is relevant and possible.
6. Provide an overall estimate of the confidence in the data that is warranted by the methodology and the quality of the data.

C. Interpretations should be forwarded on the same basis as for any other scientific study.

1. The derivation of interpretations from data should be obvious.
2. Interpretations should be parsimonious, involving as few assumptions as necessary.
3. Interpretations should be stated as plainly as possible so as to leave no doubt as to what is intended by them.
4. A clear distinction should be drawn between direct interpretations and sheer speculation.

D. Show how your ecocultural study relates to the larger body of literature on the topic you are addressing.

E. Pay attention to writing style; it counts.

1. You must get and hold the attention of your audience.
2. You are striving to be persuasive by means of a scientific contribution, not by sheer art or artifice.

F. Provide a brief summary of the ecocultural study when that is appropriate.

VIII. Community considerations

A. Ethical standards for science must be followed.

1. Reports must be accurate and not misleading in any way.
2. Ecocultural researchers, as any other scientists, must report:
   i) What they did and did not do (as relevant).
   ii) Any errors or other departures from procedure that are materially relevant.
   iii) Any preliminary exploratory or aborted studies should be reported.

B. Results should be made accessible to the community from whence it came.

C. Community leaders, or other individuals who helped create access to a group of people, should receive a copy of your report to share with the community.

Chapter 3: THE ROLE OF THEORY IN ECOCULTURAL RESEARCH

In order to identify the variables that we may wish to include, we are best guided by a theory of which variables are likely to be important in the issues under study. Social science has been plagued by a dearth of good theory, but better developed theory is a key factor in a great deal of social research since to a considerable extent theory may substitute for method, i.e., strong theory makes weaker methods tolerable (Lipsey, 1993; Sechrest, 1986).

> Kurt Lewin (1951): "The greatest handicap of applied psychology has been the fact that, without theoretical help, it had to follow the costly, inefficient, and limited method of trial and error...There is nothing so practical as a good theory."

Theory development requires, at the very least, that we identify the relevant variables believed to impact the outcomes of interest and that we specify the inter-relations amongst these variables. The matter of identifying variables is not, however, straightforward, in part because the very lack of theory makes it difficult to decide what the variables are in the first place.

As social scientists, we often use theory implicitly in our work. But we are often without explicit *a priori* theory that states precisely how proxy variables are conceptualized in our research. Without a clear understanding of the variables that might underlie the proxy variables we use, we are left to speculate about their role, often invoking them at the end of a study in discussions that purport to show possible behavioral or value differences between groups.

> Unless the potential role of ecocultural variables is identified early in the planning process for studies and allowed for in the design, the best researchers can do is to rely on post hoc explanations for findings involving proxy variables such as rural status or ethnic group.
>
> In explaining the finding that a subgroup of elder rural residents appeared objectively disadvantaged but did not perceive their situation in a negative light, Fengler, Little, and Danigelis (1983) hypothesize that rural residents' "stress on self-sufficiency and reliance may result in an older person's accurate appraisal of an unfavorable objective condition such as health or income but without a corresponding feeling of boredom, loneliness, or depression" (p. 63).
>
> Engel, Shamoon, Basch, Zonszein, & Wylie-Rosett (1995) speculate that "the excess morbidity of diabetes [in Hispanics] may be attributable to economic, social, and cultural factors that limit access to care or adherence to treatment recommendations" (p. 125).."

One of the most straightforward ways to enhance our studies in areas in which we have found group differences is to understand better the processes that we believe to be at work that resulted in those differences. By developing our theories we can improve

- the specification of research questions (e.g. by examining more explicitly the problems facing provision and take-up of mental health services by various ethnic groups, by women, by those in rural areas)
- statistical detection of effects (e.g. by reducing within-group error variance, reducing the residuals of the outcome variables

(Chen & Rossi, 1987), which will make research efforts more sensitive to subtle influences

- causal attribution and the interpretation of results (e.g. by including direct and indirect effects in our models) (Lipsey, 1993; Sechrest, 1986)
- design, implementation and evaluation of interventions (Muehrer, in press).

THEORY CONSTRUCTION

The development of ecocultural theory in mental health services research needs to be built upon specification of three types of concepts: effects, causes, and mechanisms.

Good theory must begin with an account of the phenomena, the *effects* that are to be accounted for. In relation to ecocultural mental health research that means that we must be able to delineate in detail just what the problems in mental health are that prompt us to look toward ecocultural variables as being of interest. Very often these problems are ones for which we have observed ethnic differences in outcomes. If we know that many people in an ethnic group suffer from depression, that fact alone scarcely distinguishes those people from any others. It may be helpful to know ways in which mental health problems of one particular ethnic group do *not* differ from mental health problems in other populations, but that knowledge simply suggests that no special theory is required. *Ecocultural* mental health theory is meant to account for differences. Identifying those differences requires careful definition of potential phenomena of interest and collection of high quality and relevant data to quantify them.

The ecocultural variables that are represented by race or ethnicity are the *causes* in our model, the variables that are regarded as responsible for *producing* the effects. Reconceptualizing what are currently seen as univariate social address variables into multidimensional concepts has several benefits. By more directly measuring the variables of critical interest that implicitly underlie proxy variables such as race, ethnicity, and sex, we can reduce our measurement error and increase the statistical power of our studies. We will discuss the details of this in Chapter 4, under *Measurement and Design Issues*.

MEDIATING VARIABLES

Besides explicating these causal variables, we should also spell out the *mechanisms* by which we think these causes are related to the effects of interest. For example, if we believe that discrimination is a cause of increased inpatient mental health utilization, as opposed to outpatient utilization, then we should be able to describe the process by which that cause is translated into that effect.

> As Mulaik (1987) points out "whenever possible, one should specify the causal mechanism or medium by which the effect is produced or transmitted. An ancient principle is that there is no causal action at a distance" (pg. 26).

These *mechanisms* are *mediator variables* in the theory; they are the variables that "carry" the causal power to produce effects. A great advantage of such variables is that they can, themselves, be measured and turned to use in making greatly improved estimates of the effects of interventions. Since we know that reality is more complicated than "discrimination causes inpatient hospitalization," statements such as that mask the true relation, which involves

multiple paths. Since paths must be multiplied in order to estimate overall effects, looking only at the direct effect of a variable, the effect of which is actually mediated, will result in an underestimate of the role that that variable plays in the causal pathway.

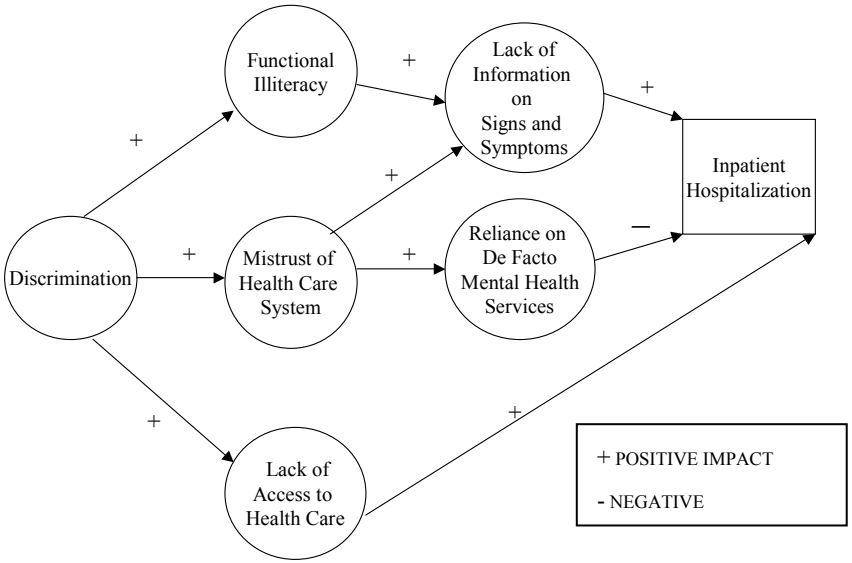
Oversimplifying for illustrative purposes, if perceived discrimination is correlated .7 with mistrust of the health care system and mistrust of the system is correlated .5 with a failure to receive information on the early signs and symptoms of a disorder, and failure to receive information is correlated .5 with inpatient hospitalization, then the effect of discrimination on hospitalization for that mental disorder would only be .175 (.7 x .5 x .5=.175). That would be a very weak overall effect, even though discrimination would be of obvious importance in the overall model.

If we do not examine the relationship of discrimination with mistrust and, in turn, with information (specified *a priori* by our theory), then we may end up discounting the role of discrimination in relation to inpatient hospitalization. By including these intervening variables, we are able to see the "dilution" of the effect and so can detect and explain small effects that might otherwise be overlooked (Hunter, 1987).

Mediated models also have the advantage of allowing us to identify agonistic or suppressor effects, for which there may be an increase in one path in the model, but a decrease in another that works to obscure the effect (Hunter, 1987; Temosock, 1989). For instance, a more complicated model of the relationship between discrimination and hospitalization could show a number of effects, including a greater reliance on an informal or de facto mental health system (Fox, et al., 1995), that might work to reduce inpatient hospitalization (see Figure 2). One might conclude that discrimination has little effect on what happens in mental disorder, but that conclusion might only reflect lack of understanding of how discrimination can change the very way in which the system operates.

Logic models are conceptual, usually pictorial, representations about the ways that these three factors fit together in any particular study. Figure 2 shows a hypothetical logic model relating discrimination to hospitalization.

Figure 2: Hypothetical Conceptual Model of the Relationship between Discrimination and Hospitalization



This model is purely hypothetical, but Scheffler and Miller (1991) posit several possible mediators to explain the finding that Blacks and Hispanics had a lower probability of outpatient care and a higher probability of inpatient care, controlling for income, insurance, age, gender and rural/urban location, stating "we do not know if they prefer this treatment pattern, are treated differently by mental health providers, or have mental health problems that require hospitalization. It is also possible that their family support and social support systems encourage inpatient care" (p 209/210). All of these are testable hypotheses, given a well-thought out and well designed study or series of studies.

MODERATING VARIABLES

One of the reasons that there has been continued interest in the variables we use as proxies is that these types of variables are often used as *moderator variables* in research (Baron and Kenny, 1986). That is, ethnicity, sex, age, education and other similar types of variables are thought potentially to interact with causal variables so that the direction and/or strength of the results depend on whether they are observed in one category of people or another. Merely showing that Hispanic people utilize inpatient mental health services or that women respond to a particular sort of therapy is not of particular interest except insofar as the findings are in contrast to those in other groups, (e.g., that inpatient services are utilized more or less or under different circumstances by Hispanic people than others, or that women respond to the therapy more or less than or differently from the way men respond).

Results of a study of recent immigrant women in the Israeli labor market indicated that immigrant women from the less developed countries in Asia and Africa constitute the most disadvantaged group. The authors then write that "This group of women appears to be at a 'triple disadvantage'" (p.108). It is not clear whether these multiple factors (ethnicity, gender and recency of migration) are simply additive in their effects or whether they involve interactions. Very often writers fuzz that distinction, sometimes quite misleadingly. To represent an interaction, it would have to be the case that the combined effects of the "triple disadvantages" would be greater (or smaller) than would be expected from their sum. It may be worse to be both female and a minority than to be either one or the other, but an interaction would require that the effect be inordinate, i.e., in the sense that it is worse to be a minority *if* one is a woman or to be a woman *if* one is a minority. Interaction effects are probably not as common as is often believed, and they are difficult to demonstrate.

Raijman, R. & Semyonov, M. (1997) Gender, ethnicity, and immigration. *Gender & Society, 11* (1).

One cue that there may be moderator variables at work is that a relationship between two variables holds in one setting (urban area), but not another (rural area), or for one sub-population (women) but not another (men) (Baron & Kenny, 1986). Therefore, failure to account for moderators can result in discrepancies in findings across studies, depending on the sample used (Temoshok, 1989).

It is quite likely that we will see moderator effects in studies of ethnic differences. As Alvidrez et al. (1996) notes, "these factors are complex; they overlap and interact with one another. For example, minority status is likely to be experienced differently by individuals from different backgrounds" (906). Bias against ethnic

groups may diminish the availability and quality of housing available. The community rate of employment differs for ethnic and gender groups. Rates of hospitalization, incarceration and involuntary commitment can be affected by the perceptions of behavior held by the community, e.g., seeing behavior as more bizarre or dangerous than it is. All of these factors can moderate the effects of treatment on outcomes such as rates of hospitalization, arrests or incarceration, the ability to acquire housing or employment, or the individual's perception of quality of life or economic strain. If we do not take into account these possible variables, we could underestimate the effectiveness of an intervention for particular groups.

> The term "Southeast Asian" or "Indochinese" covers a diverse array of groups with different histories, cultures and languages. In Vietnam, psychology and psychiatric social work was established in 1972, and by 1980 six psychiatrists were available for 16 million people. However Cambodians, ethnic Chinese, Hmong and Lao, all combined under the term "Southeast Asian", were introduced to mental health services at varying times after Vietnam and at varying degrees of accessibility. Program evaluation of service utilization must weight such experience individually and culturally before determining program effectiveness.
>
> (Wong, H.Z. (1985) Training for Mental Health Service Providers to Southeast Asian Refugees: Models, Strategies, and Curricula. In T.C. Owen's Southeast Asian Mental Health, US Department of Health, Education and Welfare: Washington DC.).

Some interaction effects may be quite large. For instance, the effect of a community intervention that distributes pamphlets to raise awareness of the signs and symptoms of mental health problems is likely to show an interaction with language spoken. If the pamphlets are written only in English, effect of the intervention may be nil among those who do not read English, although even that effect will depend on the relationships of those persons with others, perhaps relatives, who do read English. These sorts of interactions, however, are often, not in the sense that they are not important, but in the sense that they are usually quite obvious and should be detectable by common sense, without the need for systematic study.

Unfortunately, problems in detecting more subtle interactions in social science research are often serious (Smith & Sechrest, 1991). Moderator effects of interest in field studies are usually not large, and their detection requires a departure from a simpler (main effects) model, so that sample sizes must be large and measurements sensitive (McClelland & Judd, 1993). Those conditions do not always exist in studies that use proxy variables, particularly in those that are trying to differentiate amongst narrow sub-populations such as Korean Americans and Filipino Americans. Therefore, instead of using crude proxy moderator variables (such as Asian American/not Asian American), if we were to use more complex variables that actually represent the constructs of interest (for example, level of English language proficiency), we would increase the detectability of these moderated effects by reducing measurement error and increasing statistical power. Some of the ways in which unpacking proxy variables can do this are described in Chapter 4, in the section titled *Measurement and Design Issues*.

SOURCES OF THEORY

Theory has many origins, and several sources of theory can be relied upon in developing a conceptual model that relates causes, mechanisms and effects to one another.

- Know the literature. A solid review of the published literature is an important place to start. In designing ecocultural studies, it will be useful to look across disciplines, including not only traditional areas such as psychology and the medical literature, but considering anthropology, sociology and economics, as well. Reviewing work in these fields often can suggest clues for the ecological and cultural variables that underlie race and ethnicity (e.g., Goldberg & Verdoff, 1995; Matsumoto, 1996; or Sapir, 1949)
- Unearth implicit theory. Colleagues and program personnel can be sources of valuable information about just what it is an intervention is targeting. They can often describe the mediators believed to be at play, and can suggest whether moderators are likely to be involved (based on their impressions of whether the program seems to be differentially effective with some people than with others). Involve consumers. Mental health services research is viewed with some suspicion by groups who have felt as if they repeatedly participate in studies with no obvious benefit or have been excluded from research entirely (Lillie-Blanton, Anthony, & Schuster, 1993). Involving consumers in all phases of the research project can be used to make services more culturally relevant, to better identify the processes likely to affect outcomes, and to target appropriate outcomes.

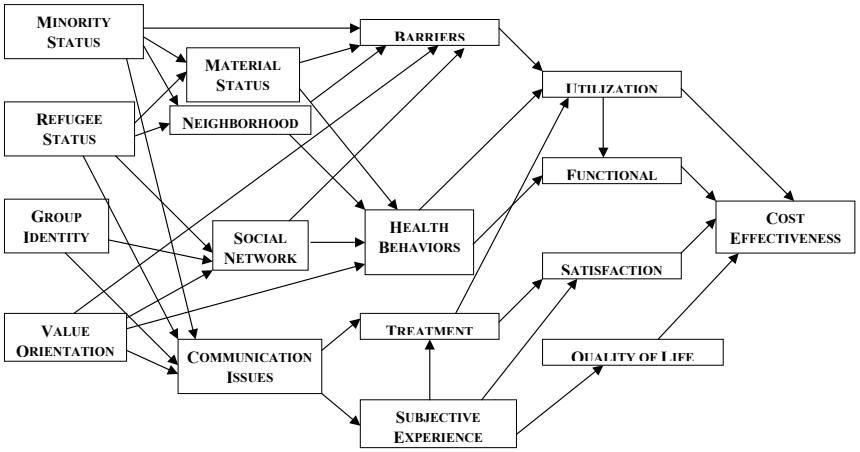
For example, housing studies in the United States seem generally to assume that independent living is a positive outcome, yet many cultures interpret such living as social isolation (Atkinson, Lowe, & Matthews, 1995). Incorporating independent living as target outcome may obscure the effectiveness of an intervention in people for whom independent living is not a personal objective.

THEORY OUTLINES

The outlines of some theories currently prominent in the literature suggest possible relations amongst some of the constructs likely to be important in ecocultural studies. These theories are by no means exhaustive of those that could play a role in ecocultural studies. Rather they are meant to serve as starting points for thinking and reading about some of the topics that feed into a broader conception of the role that ecocultural variables are likely to play in health services research.

Based on our interpretation of these theories and on our readings, we have developed a general logic model that suggests what some of the relations among these broadly defined variables might be. Of course, any particular study might hypothesize different variables or different relationships, and none would be designed to examine all of these variables. We simply intend for this instance to be a heuristic and to serve as an organizing scheme for our classification of theories and scales.

Figure 3: Theoretical Logic Model



Value Orientation

Value orientation is essentially the worldview used by people as they engage in all levels of behavior. In other words, individuals have a consistent method of perceiving, organizing and labeling stimuli. For the purposes of introduction, a few of the more pervasive orientations are described below.

Acculturation Coping strategies

Assumptions: "Acculturation is the process by which an individual becomes socialized into an unfamiliar culture" (Dawson, Crano, & Burgoon, 1996, p. 97). Immigrating individuals will adopt an acculturation strategy after entry into a new country based on their goals to (a) maintain or (b) reject their own culture and (c) adopt or (d) reject their host culture. The strategies include integration (a-c), assimilation (b-c), separation/segregation (a-d), or marginalization (b-d). Berry and his associates have led much of the research (e.g. Berry, 1998; Kazarian & Evans, 1998). The strategy of acculturation that includes ethnic identification (versus rejection) will lower psychological distress by providing personal (self-esteem, self-mastery and interpersonal trust) and external resources (belonging, social approval) to cope with stresses and demands of new culture (Nesdale, Rooney, & Smith, 1997).

Implications for mental health research: More "acculturated" individuals should be more able to make use of materials, information and procedures as delivered by most health care providers. For example, highly acculturated university students were more likely to acknowledge personal mental health needs and less often reported stigma associated with counseling.

Sample studies: (Atkinson & Gim, 1989; Nesdale et al., 1997)

Research Problems: Though most theories assume four categories of adaptation, most measures do not include all those possibilities. Second, acculturation is often a proxy for lack of experience. For example, in a study of acculturaltion and the willingness of Asian American students to see a counselor, previous counseling experience was shown to produce a significant between-subjects and within-subjects effect, whereas acculturation did not (Atkinson, Lowe, & Matthews, 1995). Whether the value of any given behavior is different between cultures is not clearly identified in most measures and may be misidentified as simply lack of experience.

Researchers have quantified "acculturation" according to changes in behavior and values by individuals that occurs when immigrants assimilate into a new group, nation, or culture. In developing

scales, many researchers have included items in the scale that they also use as criterion measures to validate the scale. Unfortunately, that practice leads to the reporting of spuriously high correlations.

ATTRIBUTIONS

Assumptions: Misunderstandings between members of different cultures are frequently caused by differing perceptions of social events. The differing perceptions interfere with personal adjustment due to stress generated by the inability to internally reconcile different perspectives of an event, the interpersonal relations between disagreeing actors, and task effectiveness due to inability to guess appropriate behaviors to complete assignment. Making incorrect attributions about behavior would generate anxiety about future interactions with a person from another culture.

Representative author: Triandis, 1972; Triandis, 1976

Implications for mental health research: Anxiety can generate health care avoidance, higher drop out rates, lower self-esteem and self-efficacy, lower self-disclosure, lower counseling effectiveness, and lower counselor credibility and effectiveness.

Sample study: Landis, Brislin, & Hulgus, 1985

Problem: Understanding does not lead directly to liking (Landis et al., 1985). Those members of groups who exhibit lower levels of anxiety with the cross-cultural interaction also have lower evaluations of members from the target culture. One explanation is that although individuals may understand, be familiar with, or even offer culture-appropriate answers, they may not like the other attitude or behavior. Therefore, understanding may not change preference. Though the members may feel less anxiety about the interaction, perceived dislike or even discrimination may still be evident.

INDIVIDUALISM/ COLLECTIVISM ORIENTATION

Assumptions: Within the context of social decision making, people tend to group into two variations: individualism or collectivism. Collectivism is the extent to which persons emphasize group vs. personal goals; individualism places emphasis on personal goals.

Implications for mental health research: Interventions and health education campaign messages target clients by either encouraging personal goals or group goals. For example, strategies to convince a smoker to adhere to a cessation program may try to limit personal freedom or target personal goals, or may attempt to show the consequences of smoking (e.g., second hand smoke) on friends and family. The loss of individual rights for the good of the group will not engender a negative reaction from a person holding a collectivist value system. At the same time, the oppression of the rights of a group to support the rights of the individual will cause reactance in a person holding a collectivist value system.

Messages may be constructed with either self- or other-benefit persuasion messages. Self versus other benefit presupposes that individuals will be more persuaded to adopt attitudes or behaviors that support their own interests over those of others.

Sample studies: Feldman, Mont-Reynaud, Rosenthal, 1992; Gudykunst, 1992; Hui & Triandis, 1986; Singelis, Triandis, Bhawuk, & Gelfand, 1995

FAMILISM

Assumptions: Individuals vary in "awareness of and pride in family membership". Through strong affiliation with a kinship network, an individual may find support and, in turn, feel the obligation to provide their family members with support and involvement, even through self-sacrifice.

Implications for mental health research: Interventions and campaign messages target clients by either encouraging personal goals or familial commitments.

Sample study: Freeberg & Stein , 1996

SOCIALIZATION PRACTICES

Assumptions: Culture provides a set of learned values and rules for behavior. Cultures vary in their values and rules for behavior, including diet, familial obligations, gender power differences, disclosure, etc. Individuals within cultures vary in terms of their exposure to and acceptance of cultural values and rules. Many cultures, for example, forbid the drinking of alcoholic beverages and others forbid sex outside of marriage, especially for women. The fact that a particular person has such a cultural background, however, does not warrant a strong assumption that he or she will be mindful of those cultural proscriptions. If one were interested in them and in their effects on mental health, one ought to be prepared to measure them at the level of the individual if at all possible.

Implications for mental health research: Investigators interested in, for example, the relationship between mental health and certain stresses associated with particular sex roles should not assume that statements of ethnicity, especially as usually obtained, would be more than weakly associated with actual sex roles of interest. Or, an investigator should not assume that because of ethnic or cultural identity that abuse of alcohol could not contribute to the problems of some group of patients. If cultural experiences or constraints are of interest in relation to a problem or a proposed intervention, the investigator should be prepared to assess the cultural variable(s) directly or else be resigned to the possibility of a weak or even wrong conclusion.

Problem: Differences in diet are often cited as important phenomena that may have ecocultural origins, but diet also reflects socioeconomic status. Other health-related lifestyle characteristics, such as smoking behaviors, drinking behaviors, and the like are similar in the questions they raise. It is unclear to what extent these behaviors originate culturally, socio-economically, or structurally.

COMMUNICATION PREFERENCE

Assumptions: Language is a learned, rule based system. Members of a language group develop preferences in language execution and meaning. Usually, violations of expectations will be met with resistance to persuasion or even stronger differences in opinions held by the speaker and listener. Persuasion will occur in two circumstances: a person not expected to perform socially accepted behavior performs a behavior within social norms, or a person expected to perform within social norms, exceeds expectations in a good way (Burgoon, 1993).

Implications for mental health research: The experience of therapy (quality, effectiveness), screening interviews, preferences in information deliver and behavioral modification are based on the expectations of language execution and meaning.

Acculturation is not simply a matter of language fluency, but ability to execute preferred communication behavior and understanding of culturally bound meanings. Therefore, training for acculturation or culturally competent care must, therefore, include the replication of message structure and delivery most preferred for that culture. Even then, communications failures must be considered carefully as alternative explanations for unexpected findings. Part of the communication style of some cultures is a disinclination to be critical of those to whom one is responding, which could lead to mistaken conclusions, for example, about satisfaction with services being provided to a group.

> One of the authors (LS), while in the Philippines, was affiliated with a group doing surveys in rural communities. The survey team was confused by the very different answers they were getting to a questionnaire concerning needs of communities for local development projects. Some communities seemed focused on water supply, some on electricity, some on roads, and so on. Ultimately, it was found that rumors having to do with the origins of the survey team preceded them into each community. In communities in which it was believed that the survey team represented the national water system, the community was agreed that water was the main need; other communities, having arrived at the conclusion that the team was from the national electrical authority were strong in voicing needs for electrical power development, and so on. In that case, the communication preference was directed at obtaining assistance of any kind, not necessarily for accuracy in communication.

Sample studies: Burgoon, 1993; Burgoon, 1997, Burgoon, 1997

LANGUAGE OR CONCEPTUAL BARRIER

Assumptions: Humans have developed different rule based languages with shared contextual meanings. Language structure, vocalization and shared meanings are learned. The validity and reliability of measures are distinctly threatened when the measures are used with subjects who may not comprehend the stimuli as intended by the researcher (or other native speakers).

Implications for mental health research: Mismatches between expectations and actual behavior would generate misunderstandings, which could lead to health care avoidance, higher drop-out rates, lower self-esteem and self-efficacy, lower self-disclosure, lower health care effectiveness, and lower health care provider credibility and effectiveness.

Sample studies: Canino & Bravo, 1994; Canino et al., 1987; Sue, 1981

MATERIAL STATUS AND NEIGHBORHOOD

Assumptions: Restriction of goods and services for lack of money can result in physical and mental problems and the inability to medicate or resolve physical and mental illness. Similarly, the restriction of social support and political power creates a deprived state associated with or causing mental health outcomes.

Implications for mental health research: Lack of adequate food, water, shelter, safety and medical prevention or medication affect the utilization, quality, and outcomes of mental health services. For example, high-density living and high crime neighborhoods are associated with chronic stress, which may affect mental health in critical ways, along with access to treatment and response to it.

Sample studies: Macintyre & West, 1993; Polednak, 1991; Wilson, W. J., 1991a & 1991b

Problem: Numerous studies point to poverty as the driver of health status although the relationship is complex. Despite the fact that both populations have similar high rates of poverty, 23.9 % of black families, and 22.3% of Hispanics families (Shinagawa & Jang, 1998), the mortality rate of Hispanics is very similar to that of whites, and much lower than for Blacks.

All researchers involved in studying phenomena related to geography should be aware of and alert to manifestations of what Robinson (1950) labeled the *ecological fallacy.* It is tempting, but wrong, to suppose that relationships that are apparent at an aggregate level are applicable at the individual level. For example, many years ago it was observed that in the city of Chicago a relationship existed between the number of single room dwelling units and the number of suicides in neighborhoods. An obvious hypothesis was that people dwelling alone were socially isolated and, hence, vulnerable to suicide. It was later found, however, that the people actually committing suicide in those neighborhoods were not especially likely to be either living alone nor in the single room dwellings. Another example is that crime is more prevalent in groups and in areas with high rates of unemployment, but crime is not particularly likely to be committed by unemployed persons (Martin, Sechrest, and Redner, 1981).

Martin, S.E., Sechrest, L., and Redner, R. (1981) New Directions in the Rehabilitation of Criminal Offenders. Washington, D.C.: National Academy Press.

Robinson, W. S. (1950). Ecological correlations and the behavior of individuals. American Sociological Review, 15, 351-357.

MINORITY STATUS

Assumptions: Humans create environments in which societal resources or other goods are differentially allocated on the basis of racial or other group membership, a hierarchy by which one racially defined group is assumed to be entitled to more than its share of power, statues, or resources, whereas other groups are entitled to proportionally less. It is often the case that distinctions between groups are based on assumed racial or ethnic variations, although other distinctions are possible, e.g., social class.

Implications for mental health research: Experimenter or political bias may skew the health care system in such a way/ research in such a way that certain populations are segregated from health care/treated differently. That skew may then result in perceived or real differences in the fairness of the system and in health outcomes.

Race matters, and so does ethnicity. In many circumstances what is important is how people are perceived in relation to race or ethnicity, not how they perceive or prefer to think of themselves. American literature includes a number of stories, some true and some imagined, of persons of one race who "passed," at least for a while, as a member of another race (usually black and white, but in both directions). Invariably, the stories recount the strong effects that result from racial assignment.

On such novel is Black like Me, written by John Griffin. This book contains journal entries of a two-month journey that Griffin took under the disguise of a black man. Griffin reflects back to growing up as a wealthy white boy in the South, and questions why Southerners, and humans in general, act the way they do regarding race. This story was also made into a movie, "Black like Me" (1964).

(Griffin, J.H. (1977). *Black Like Me*. New York: Penguin Books).

Sample studies: Graham, 1992; Hurwitz & Peffley,1992; Miranda, 1996; Miranda, Azocar, Organista, Munoz, & Lieberman, 1996; Thompson, Neighbors, Munday, & Jackson, 1996

STRESS OF MINORITY STATUS

Assumptions: Humans categorized into a minority group experience "stress" of being a member of a minority group, which influences health.

Sample studies: Nesdale et al., 1997; Saldana, 1994

Problem: Further research is needed to determine the degree to which minority group status per se, and the stress and discrimination associated with that status, affects health above and beyond socioeconomic considerations, self-esteem, or locus of control, and other variables.

Although discrimination, or its possibility, is an obvious stress that may be associated with minority status, other stresses are certainly possible. For example, persons who are in a minority in their groups or neighborhoods may have less social support, may feel pressure to live up to certain role expectations, or may have more different roles to fulfill. Stress may arise simply from the feeling of being under closer and more constant scrutiny than are other people.

MIGRATION EXPERIENCE

Assumptions: Individuals receiving refugee status are seeking asylum in this country from social, physical, political, religious, or ethnic persecution. Persecution experienced prior to migration can leave mental scars, that may need intervention. Additionally, continued persecution, acclimation to the host country, or other post-migration experiences cause stress, which may manifest itself in a variety of mental health conditions.

Typical Authors: Nesdale et al., 1997

Implications for mental health research: mistrust, development of mental health concerns, anxiety, compatibility of patients or counselors, health care avoidance, access to health care, financing of services.

Problem: Many refugees may not be forth coming with their previous experiences, due to persecution for such disclosure or to other social constraints.

GENETIC DIFFERENCES

Assumptions: Physical differences between persons often have genetic origins. Those physical differences in turn influence biological mechanisms. Some genetic differences are associated with race and ethnic categories.

Implications for mental health research: Individual biological differences may affect drug sensitivity, resistance, or allergic reactions. Genetic factors may affect hormonal regulation, aging differences (i.e. senility or dementia), or physical conditions that demand mental accommodation.

Solution: Test for the actual suspected difference of genetic origin, e.g., Sickle-cell trait, hormonal variations, etc.

GROUP IDENTIFICATION

Assumptions: Social identity, a learned part of an individual's personality, provides the context and meanings of the world and experiences. These stimuli are referenced to group attitudes, beliefs, customs, and values. Ethnic identity is the degree to which an individual assigns his or her racial/ cultural group membership as a salient reference group for social identity. Marginal ethnic identification may erode the sense of belonging and self-appreciation, thereby damaging mental health (see acculturation). Ethnic Identity may be enhanced in response to discrimination based on racial membership in allocation of resources (Ponterotto et al.,1995a).

According to Tajfel (1981), ethnic identity is the portion of a person's self-concept produced by knowledge of social group membership and the value and emotional significance related to that membership. Many theories support the idea that (1) groups share common elements of ethnic identity, and (2) ethnic identity is of particular importance during adolescence when, in the process of ethnic identity achievement, individuals explore the meaning of their ethnicity and develop a secure sense of themselves as members of a minority group.

Typical Authors: Atkinson & Gim, 1989; Banks, 1981; Cross & Maldonado, 1971; Helms, 1990

Implications for mental health research: Preferences in health care delivery, beliefs about health care effectiveness, and self-disclosure are related to ethnic identification and can be affected by cultural factors.

Sample studies: Gaines & Reed, 1995

Problem: 1) The distinction between acculturation, racial identification, ethnic identification, racism, attributions and cognitive growth is not very clear. Most users of the mechanism of racial or ethnic identification do not restrict its definition to the above, but include a "social" dimension of self-esteem, i.e. self-worth and self-derogation, acculturation, discrimination, etc. In addition, many of the constructs allude to a "right" cultural philosophy, e.g. blacker skin is better (though not that blatant), causing great variance in questionnaire responses. See definitions below for the difference between racial and ethnic identity.

2) Most measures seem to assume that ethnic or racial identity is categorical, instead of continuous or multiethnic. For example, if a person has a Filipino mother and a half-Latin American/ half-African father, he may sign off on Asian identity on questionnaires, though he feels a connection also to Latin and African cultures, even if to a lesser degree.

ETHNOLINGUISTIC IDENTITY THEORY

Assumptions: Individuals will define an encounter with a non-group member in interethnic terms, consequently adopting strategies for positive linguistic distinctiveness when they: 1) identify with a group that deems language as a characteristic of membership, 2) make insecure interethnic comparisons, 3) perceive their self-identified group to have high ethnoliguistic vitality, 4) perceive rigid and inflexible in-group boundaries, 5) identify strongly with a limited number of other groups, 6) perceive little similarity with the non-group member in other social category memberships, 7) consider other social identity affiliations weaker or less adequate than the one in question, and 8) perceive their relative status within the ethnic group to be higher than in their other social identity affiliations.

Implications for mental health research: Mental health professionals may very well come to view a patient in ethnolinguistic terms for any or all of the reasons noted, and their views may be reflected in actions that are not necessarily appropriate and therefore not necessarily effective. Similarly, however, and probably even more likely, patients may have inappropriate, however predictable, views of the mental health personnel with whom they must work. Consequently, it is important to understand whether issues related to cultural sensitivity or competence reflect real problems or problems of perceived ethnic identity.

Sample Studies: Giles & Johnson, 1986

Chapter 4: MEASUREMENT AND DESIGN ISSUES IN ECOCULTURAL RESEARCH

Measurement is one of the most overlooked areas of applied social science research. Researchers may believe that concern for measurement is best left to specialists such as psychometricians. It is important to understand, however, problems of measurement are all too often at the very root of shortcomings in research, and investigators should accept responsibility for ensuring that measurement issues are dealt with in a satisfactory way. The fundamental principles of measurement are not beyond the conceptual grasp of otherwise qualified researchers.

Conclusions about what are reported as ethnic differences in mental disorders and their manifestations, as well as in responses to treatments, cannot be properly estimated without adequate measurement of both the independent and the dependent variables. In this toolkit we focus on measurement of independent variables; however, it behooves the reader to apply the same strategies to measuring dependent variables. First we will address the measurement issues inherent in using ethnic groupings as an independent variable in our mental health services studies.

PROBLEMS WITH PROXY VARIABLES

THE IMPACT OF ETHNIC QUESTIONS

Sometimes, merely asking a participant to answer questions pertaining to racial or ethnic identification can be *reactiv*e, that is, it elicits a reaction in the people who are answering the questions.

Reactive measures that produce systematically biased responses from a participant. According to Webb, Campbell, Schwartz, Sechrest, & Grove (1981) systematic bias, or error, may result from participants' awareness of being tested, role selection, measurement as a change agent, or response sets.

In interviews conducted by the US Census Bureau, a number of respondents reported feeling defensive after being asked questions about their racial and ethnic identity or of others in their household (Burgoon, 1993). Facilitators recorded that participant sensitivity ranged from sarcastic responses and refusals to answer the racial and ethnic questions to completely interrupting the interviewer, not allowing them to finish asking the questions.

The issue of ethnicity is emotionally charged. Drawing attention to the fact that it plays a prominent role in a study may potentially bias the way people respond to other measures. This is not to say that participants should be mislead about the purposes of the study, but rather that researchers should carefully consider the role that ethnicity plays in their work and how they inquire about it. By asking more thoroughly about ecocultural variables, researchers may be able to place their questions in a broader context that makes it clear to participants that the study is well thought out and that ethnic questions are not just "tossed in."

One possibility for addressing certain aspects of ecocultural research is to use carefully crafted *nonreactive* measures. In general, nonreactive measures are those that are resistant to effects stemming from conditions of measurement such as the desire of the subject to appear in a favorable light. Three principal sources of nonreactive measures are physical traces, archives, and simple observations (Webb, Campbell, Schwartz, Sechrest, & Grove, 1981).

Researchers interested in studying ecocultural variables by nonreactive techniques will need ingenuity and creativity to find, or devise, measures within these categories. Efforts to do so, however, may pay substantial dividends by allowing researchers to rule out plausible rival hypotheses for difference findings and better answer critics' questions pertaining to the valid interpretation of findings of differences between racial, ethnic, and cultural groups.

Examples of nonreactive measures:

Rathje (1979) discovered that Mexican-Americans waste less food than Anglos by spending considerable time studying people's garbage.

Researchers compared ethnic attitudes in two colleges by noting the degree of clustering of blacks and whites in lecture halls. (Webb, et al., 1981, p. 2)

HOMOGENEITY OF GROUPS

One of the most insidious problems with using social address variables as predictors in our studies is that they reinforce the notion that all of the individuals who "reside" at that social address are the same. This assumption of homogeneity has substantial implication for measurement error. Ethnicity, as used in our studies, is discrete (black/non-black; Hispanic/non-Hispanic), but the underlying ecocultural variables generally of interest (e.g. collectivist beliefs, discrimination faced, access to services, environmental exposures) are continuous and overlap both groups.

The implication of using these proxy variables can be made clear by looking at the distributions they imply.

Figure 4: Distribution Assumed by Use of Categorical Variables

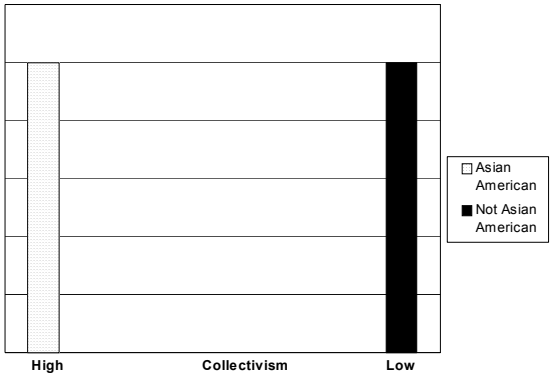
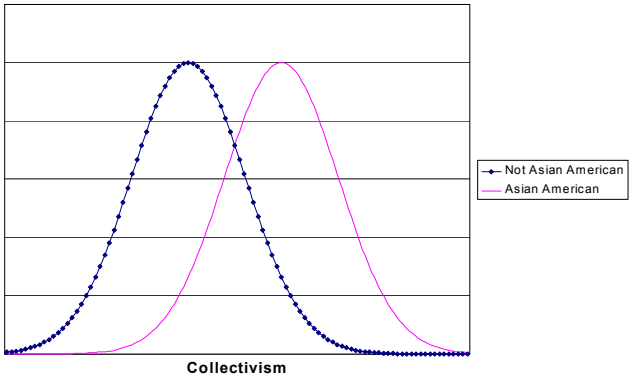


Figure 4 suggests that when we use proxy variables to represent ecocultural variables in our studies, we are assuming such things as that all Asian American individuals are high on collectivist beliefs, and all non-Asian American individuals are low on collectivist beliefs. Lopez and his colleagues (Lopez, Blachar, & Shapiro, in press) have referred to this as the cultural elements approach, in which cultural elements are assumed to correlate highly with reports of ethnicity. Yet ethnic groups are by no means homogenous, and treating them as such is rarely justified. The empirical evidence for such an approach is weak (Lopez, et al., 1997; Phinney, 1996) and it may promote fixed, stereotypic views of ethnic groups (Lopez, et al., 1997).

Feldman et al. (1992) found that there were no differences in individualism between American-born children of Chinese immigrants and American-born children of parents of European descent.

It is much more likely that ecocultural situations and beliefs are distributed across ethnic groups in such a way that there is often considerable overlap across groups, as is illustrated in Figure 5.

Figure 5: More Likely Distribution Underlying Latent Variables



By replacing these continuous variables with dichotomous proxy variables we reduce the precision of our measurement. The effect of this is that one-fifth to two-thirds of the variance that might have been accounted for by the original ecocultural variables (had we measured them) is lost, resulting in a loss of statistical power that would be equivalent to discarding one-third to two-thirds of the sample (Cohen, 1983). Given that studies of ethnic groups, particularly subsets of ethnic groups (Leong, 1998), are often conducted on small samples, such losses can have very important

implications for the ability to detect effects and to estimate the magnitude of those effects.

Dichotomization: Measuring a continuous characteristic or variable by creating discrete categories for classification

Type I error: concluding that a difference or effect exists, when in fact it does not

Type II error: concluding that no difference or effect exists, when in fact it does

Statistical Power: The probability that a test will yield statistically significant results if a difference or effect does, in fact, exist

Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences*. (Second ed.). Hillsdale: Lawrence Erlbaum Associates.

Kraemer, H. C., & Thiemann, S. (1987). *How Many Subjects? Statistical Power Analysis in Research*. Newbury Park: SAGE Publications.

STATIC VS. DYNAMIC PROCESSES

Another basic limitation of using social address variables such as race, ethnicity, sex or rurality is that the underlying variables they represent are likely to change over time, whereas the measured proxies may not, indeed, often cannot. A woman will remain female even though she may move out of poverty or marry into a family whose own beliefs and attitudes affect hers. It is sometimes true that people can change their social address, but if they do, that may not alter the underlying construct. For instance, there is probably something to the notion that "you can take the boy out of the country, but you can't take the country out of the boy," if by country you are referring to beliefs and attitudes about when and how to seek help gained through a life of self-reliance on a family-owned farm, or to functional illiteracy from having to travel during the school years with migrant worker parents.

Using proxy variables will not allow us to get at the subtle, or even not-so-subtle, changes that people may undergo in the course of their lives, or even in the course of our studies. If we are to capture adequately and more accurately the dynamic processes that lead to the outcomes of interest in mental health services research, it is not enough to use convenient shorthand variables; we must be prepared to invest time and resources into unpacking these, instead.

UNDERESTIMATING EFFECTS OF UNDERLYING VARIABLES

When conducting program evaluations, we often use general linear model approaches to examine our data. These techniques (which include ANOVA and regression) assume that we have measured our variables without error. But if our indicators (proxy variables) are not perfectly correlated with their underlying (ecocultural) variables (and they are not), then the resultant beta coefficient underestimates the effect of the underlying variable, often substantially.

Let us consider the case in which we would like to test the impact of collectivist beliefs on mental health service use outside the community. In our study, we ask a single question about ethnic group membership as a proxy for collectivist beliefs. As Hunter & Schmidt (1990) point out, there are two types of measurement

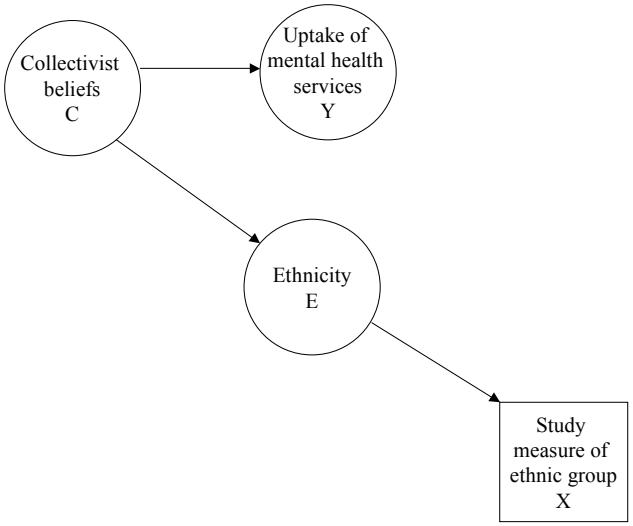
error introduced by using a proxy variable in this way. The first type is systematic error introduced by using ethnicity instead of measuring collectivist beliefs directly. Systematic error refers to the imperfect *construct validity* of the measure: that is, the independent variable (collectivism) that we are really interested in is imperfectly correlated with the actual independent variable used in the study (ethnic group). The second type of error is the random error produced by using an imperfect measure of ethnicity (a single question to describe a complex construct). This second type refers to the imperfect *reliability* of the measure of ethnicity.

When measuring our dependent variables, it is unlikely that we would use a single question to assess depression in a client, or use a single episode as a measure of utilization of services, or make an inference to the population from a single case. Yet we consistently rely on the inappropriate use of a single question (some variant of "What is your ethnic group?") to represent the whole complex of variables that are assumed to underlie the social address of ethnicity. Using a single measure of a construct is almost always less reliable, that is, less dependable, than using aggregated measures (Rushton, Brainerd, & Pressley, 1983).

Asking a single question about what ethnic group a person identifies with is not a dependable way to ascertain what someone's actual ethnic identification is, and how strong that identification may be. How they respond to the question may differ in different settings, or at different times, or when asked by a different person. If we ask more questions, we are likely to have a more dependable estimate of ethnic identity (assuming that the questions that we ask are relevant!).

Reliability: The dependability of a measure across one or more different conditions of use, or facets (such as items, time, populations, settings, investigators) (Sechrest, Stickle. and Stewart, 1998)

Figure 6: Validity and Reliability of Proxy Variables

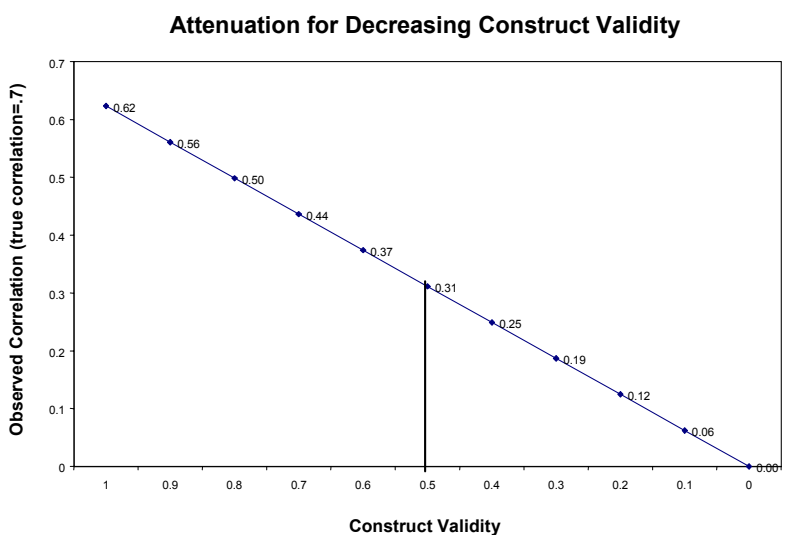


We can see what effect imperfect construct validity and imperfect reliability have on our results. Figure 6, a path model, illustrates these relationships. The path from C to E (r_{CE}) represents the construct validity of ethnicity as a measure of collectivism, and the square of the path from E to X (r_{EX}) is the reliability of the study measure of ethnicity (that is, how dependable a measure of ethnicity the question or questions about ethnicity are). The total discrepancy between the intended independent variable of

collectivism and the study measure of ethnicity is the product of the two path coefficients, or $r_{CX}=r_{CE}r_{EX}$ Hunter & Schmidt (1990) refer to this as the "operational quality" of the study proxy variable, or *a*.

In order to assess the effect of systematic error in the measure of the intended independent variable (collectivism, in this example) on the observed correlation between the study independent variable and dependent variables, we can use the attenuation formula $r_{XY}=ar_{CY}$ or, more generally, $r_O=ar$ The observed correlation is attenuated (that is, reduced) by the factor *a*, so that the lower the operational quality of the study independent variable, the greater the attenuation of the study correlation between the independent (collectivism) and dependent variables (measured service uptake).

Figure 7: Attenuation for Decreasing Construct Validity



We can see in Figure 7 that even if we were to hold the true correlation between collectivism and uptake of services constant at a large effect size (say *r*=.7), and hold the reliability between the intended proxy (ethnicity) and the measurement of that proxy in the study (ethnic group) at .80, the effect of decreasing construct validity on the resulting observed correlation is still substantial. For example, when the true correlation between collectivism and access is 0.7, if the correlation between Asian ethnicity and collectivist beliefs (construct validity) is only .5, then the maximum observed correlation between collectivist beliefs and the outcome of interest, say resistance to seeking services outside of the community, is only .3. [1] By using poorly conceived and measured proxy variables, we may be consistently underestimating the effects of ecocultural variables on health services use and outcome.

PROBLEMS WITH RISK ADJUSTMENT APPROACHES

We have already shown how using proxy variables (such as ethnic group) to represent the actual causal processes we may think are at play (such as collectivism) introduces measurement error. The picture is made more complicated by the fact that even measuring some of the ecocultural factors that may covary with the proxy

---

[1]construct validity: $r_{CE=}$ .5; square root of reliability: r_{EX} =rsqrt.8=.89 ;

operational quality: a=.5*.89=.45;

true correlation: .7

observed correlation: $r_{XY}=ar_{CY}$=.45*.7=.31

variable, such as socioeconomic status (SES), and attempting to control for them as is traditionally done in risk adjustment-type analyses does not clarify the independent effects of these ecocultural variables.

Kaufman, Cooper and McGee (1997) illustrate some of the problems with this approach. They note that the relation between SES and numerous physical and mental health outcome variables has been widely demonstrated, as has the link between SES and ethnicity. SES is a complex construct encompassing purchasing power, environmental exposures, housing conditions, etc. SES is too often poorly measured, e.g., by no more than a question about earned income, and so the effect attributed to ethnicity is potentially overestimated because of the measurement error in using income as a proxy for SES. That is beyond problems stemming from inadequate measures of "ethnicity." Consequently, many studies "control" for SES (measured poorly), then analyze ethnic differences. Any residual difference, "persisting after adjustment for SES", is likely to be discussed as evidence for racial or ethnic differences. Such conclusions require the erroneous assumption that after allowing for income differences the groups are now equivalent on all other socially or environmentally related exposures (Antonovsky, 1967; Victor, 1989). Such errors are likely to result in underestimating the effect of SES (as a broad construct) and over-estimating the direct effect of race or ethnicity.

In addition, the proxy variable, if highly correlated with true SES, may actually be a better measure of the underlying socioeconomic variable than the measure of SES actually used in a study. For example, housing discrimination may mean that a black woman, even a woman making a substantial amount of money, ends up living in a neighborhood that exposes her to environmental hazards (physical, such as toxins; or social, such as robbery). In this case, asking about race or ethnicity may be a better measure of the woman's environment than asking about income. Such ambiguities also lead to erroneous conclusions that emphasize ethnicity and discount SES, and the social factors that influence SES, as causal influences. Using poor measures of SES or other ecocultural variables can especially be a problem in analyses in which significance testing, rather than theory, is used for the purpose of final model selection, since because of collinearity SES may be dropped from the model entirely.

In an eight-site study of 3 year old children and their mothers (n = 895), the effects of neighborhood and family-level socioeconomic status were compared to maternal psychology and behavioral characteristics. Both neighborhood and family poverty indices had adverse effects on maternal characteristics and the home environment. Although family poverty was associated with most of the maternal outcomes, neighborhood poverty also played a role, even after controlling for family poverty and other family-level measures, including ethnicity. Low-income neighbors were associated with a worse physical environment in the home, as well as less warmth between mother and child. However, ***neighborhood*** poverty was not associated with the provision of learning experiences, maternal depression, or behavioral coping.

Klebanov, P.K. & Brooks-Gunn, J. (1994) Does neighborhood and family poverty affect mothers' parenting, mental health, and social support? *Journal of Marriage & the Family 56* (2).

SUMMARY

- Using ethnic group labels alone often misrepresents those groups as homogeneous

- Dichotomizing the underlying variables of interest by breaking people into ethnic groupings can result in a substantial loss of statistical power
- Ethnic group labels do not capture the dynamic processes that have an impact on service use and outcome
- Using proxy variables can lead to an underestimate of the effects of ecocultural variables on service use and outcome
- Risk adjustment techniques require careful consideration of the covariates used in order to make results interpretable

> Kaufman, et al. (1997) assert that failure to grasp the effect of measurement error on findings can lead to the reification of immutable ethnic differences: "Questionable techniques may be retained if they provide what is believed to be the "right" answer, and in a society with deeply ingrained beliefs about racial difference, a scientific confirmation of these differences is the expected, and therefore the "right," answer." (p. 627)

IMPROVING OUR MEASUREMENT OF ECOCULTURAL VARIABLES

It should be clear by now that merely asking a simple question about race or ethnicity is not enough to allow us to adequately measure the ecocultural variables that are of actual interest in most multicultural studies of health service use and outcome.

How then, can we improve our measures of these underlying variables?

CHOOSE THE RIGHT MEASURES

When considering which measures to use, we should aim to select those that are:

- Chosen to closely map the construct under study. When deciding on measures to use, it is crucial to select those that are good measures of what we are actually interested in studying. Again, theory will be the guide in identifying what the constructs of interest are. Previous literature that identifies what instruments have been used by others studying the same constructs and that discusses the psychometric properties of the instrument being considered will be invaluable.

> Constructs
>
> Constructs are the broader concepts of interest in studies. Investigators select particular variables to measure that represent these concepts. (Pedhazur & Schmelkin, 1991, p. 52).

- Acceptable. Measures that are not acceptable to respondents will lead to missing data or skewed responses and the data may become uninterpretable. Acceptableness can refer either to the content of questions or to the way in which they are asked. What is considered acceptable may be, in part, dependent on cultural or ethnic factors. For instance, inquiring about sexual behavior may be more highly sensitive or taboo to people with a particular cultural orientation and the answers the respondents give many not be authentic (Dor-Shav, 1990).

- Ethnically descriptive. Members of ethnic groups may vary in how they prefer their group to be referred to. For instance, depending on country of origin or region of the US in which they reside, some Spanish-speaking people may prefer to describe their ethnicity as their country of origin, Hispanic, Latino, Chicano, Nuyor Rican, Tejano, Hispano. Questionnaires or interviewers that do not take these preferences into account risk alienating their participants.

> For example, asking a religious Muslim of Senegal, West African, how many children he has would be an insult to his religious fervor. The number of children is often equated to degree of religious dedication, so questioning the number of children may put a Senegalese on the defense as to his religious beliefs.

  Often, the best way to determine whether instruments are likely to be acceptable to the majority of the population to be studied is to ask a representative sample of the people likely to be involved. This inquiry may take the form of focus groups or interviews and may also involve panels of people who have worked intensively with the population who can also provide input as to the likely acceptability of the instruments. Of course, there will still be individual differences amongst participants that may lead to error in the measurement for any particular person. But by carefully assessing the likely acceptability over all, that error may be considered generally random rather than systematic for any particular group of people.

- Feasible. Measures that cannot be completed in a reasonable amount of time, or that must be administered by overworked clinicians, or that require computer input when there are no computers to be had, are all examples of unfeasible measures. No matter how impressive an instrument may seem, if it is not going to be completed, for whatever reason, it is not feasible to use it.

  It is important to keep in mind, however, that the feasibility of a measure is determined by the context of the study, and is not something inherent in a measure itself. For instance, although a clinician-administered scale may not be feasible in certain community contexts, it might be appropriate for use at a university clinic where trainees are available. Or, if the instrument seems to be particularly valuable, it might be worth shifting resources to support administrating it—buying a computer or reducing other measures that are requested, for example.

- Cost effective. A cheap and easy measure that does not show anything of interest is not cost effective. It is better to take the time to ask a few more questions, or to work a little longer on developing appropriate questions, than to fall back on the easy way out. That is why it is rarely appropriate to use proxy measures.

  It is just as important not to throw in a lengthy scale without thoroughly considering its usefulness. Respondent burden is an important cost to keep in mind. We owe it to our participants to have carefully considered the instruments and techniques we use in our studies and to have identified the ones that will provide the most information for the monetary and time cost.

Perhaps the best way to assure that measures are acceptable and feasible and likely to be cost-effective is to conduct pilot studies to test them. Such studies might involve more qualitative approaches such as interviews and focus groups to assess acceptability, and trial runs with study and program staff to assess feasibility of collecting the data. Although pilot studies require more time up front, they are likely to pay off tremendously in the interpretability of results in the long run.

CHOOSE RELIABLE MEASURES

Unfortunately, the reliability, or dependability, of measures in the social sciences is often not impressive. It is often not even considered or known. However, as indicated earlier, the reliability of our measures is usually improved by incorporating more than one measure of the constructs that we are interested in (Epstein, 1979, 1980; Wittmann, 1988). Practically, we are often pressured by real-world constraints to limit the number of measures we use. In that case, we must be guided by a strong theory about which are the most crucial variables to measure in our particular study and focus on those (see Chapter 3, *The Role of Theory in Ecocultural Research*).

"Reliability" refers quite broadly to the dependability of measures across a range of aspects. These are some of the most common types of reliability referred to in the literature.

Internal consistency reliability

A measure of whether the items supposedly measuring a single construct are correlated with one another. A result of these test suggest whether or not the items are measuring the same thing, and, therefore, determines whether or not the data are interpretable as a single construct (Krathwohl, 1993, p. 207, 211).

Stability (test/retest) reliability

This is a measure of consistency over a designated period of time (Krathwohl, 1993, p. 210-211). This is usually given as the correlation between the score taken at one time and the score taken at a later time, without expected effects of an intervention.

Equivalence reliability

This is a measure of the equivalence between two different, but compatible or comparable tests, usually given as a correlation between the two tests. This helps determine whether or not they are compatible and can be used interchangeably (Krathwohl, 1993, p. 210-211).

Although one must be a realist in selecting measures, also keep in mind that improving measurement is often the single least expensive way of improving studies. After all, having identified and recruited participants, the incremental cost of including more measures is relatively low.

After identifying measures that are acceptable, feasible and cost-effective, one should try to identify and use multiple measures of the same construct. If possible, one should select a minimum of

three measures for each construct; that would allow for the possibility of incorporating more sophisticated analysis techniques such as factor analysis that allow for estimation of measurement error but require multiple indicators of a construct (see Chapter 6, *Implications for Analysis and Interpretation*). Even when one does not anticipate using such techniques, aggregating across multiple instruments will improve the dependability of measurement and hence the ability to detect an effect.

Besides aggregating across multiple measures, aggregation can also be done across multiple occasions of the same measure over time in order to improve reliability. This is useful not only for measures that are not anticipated to change with the intervention (that are believed to be stable, such as SES, perhaps), but also for more reliably measuring change in those that should be effected by the intervention (such as service utilization, or functional status). Again, see *Implications for Analysis and Interpretation* section in Chapter 6 for a discussion of these techniques.

CARVED-OUT SCALES

Realistically, researchers are not always able to include entire instruments in their studies: perhaps the instruments are too long, or seem redundant, or tap into multiple areas, some which are not of interest to the study. In such cases, investigators often choose to use portions of measures, or measures adapted to their particular study, creating what are commonly referred to as *carved-out scales*. In selecting items for use, it is important to keep in mind that the dependability of the measure is likely to decrease when fewer items are used. In order to maintain as much of the reliability as possible, one should be guided in item selection by reports of the inter-item correlations, choosing those that correlate highly with other items in the scale, and by face validity, choosing those that seem most appropriate for the current purpose. Again, select at least three items to measure the construct of interest.

Generally speaking, taking individual scales out of the context of longer instruments or batteries to which they belong seems to have very little effect on their psychometric quality (Babcock and Sechrest, 1996).

Chapter 5: Devising and Evaluating Interventions

We have urged a theory-driven approach to conceptualizing and conducting ecocultural research. However, developing and testing complex models with multiple components requires substantially more outlay of time and resources than does merely asking a single question about race, ethnicity, sex, residence, income, age, education or any of the other myriad of proxy variables that are employed in mental health services research. We have touched on some of the benefits of taking on this increased burden in research, couched in broad terms of improved statistical power and greater understanding of the phenomena at hand. But it is perhaps in the pragmatic arena of intervention research that the gains in unpacking and modeling the variables implicitly associated with social address variables can be most easily appreciated.

Specifying mediator variables can allow one to better identify and devise appropriate interventions to ameliorate some of the group differences that have been identified to date. For instance, knowing that ethnicity is related to reduced inpatient mental health service utilization provides no clear guidelines for the sorts of programs that might be appropriate to increase the utilization, as Scheffler and Miller's (1991) musings about the possible reasons for that difference make clear (see page 3-4). Even if we were to narrow the field solely to discrimination as a cause, we still would not have a very good idea of how to counter those effects: Do we work at the public policy level to discourage discrimination? Do we not admit people of color to inpatient units? But, referring back to Figure 2, page 3-3, if it is correct that discrimination acts through a pervading sense of mistrust of the medical system, a lack of information about relevant signs and symptoms, and a lack of access to earlier levels of care, we can take steps to get information out through lay referral systems and to provide care in more accessible locations.

In addition, more complex models allow for the awareness that outcomes can be multiply determined, which may lead to the development of multiple interventions (Temoshok, 1989). If one intervention then proves ineffective or unacceptable, alternatives can be made available. This flexibility may be especially important when dealing with a diverse clientele for whom certain types of interventions are more acceptable than others.

After developing interventions targeted towards improving some outcome, having a well-developed model can also help evaluate the effectiveness of those interventions. By assessing the various paths in the model, one can perform manipulation checks on programs to observe whether the intervention had the intended effects on the intervening variables (Hunter, 1987). If there is evidence that the mediators were affected, for instance, that people's knowledge about the early signs and symptoms of serious mental illness had improved, but that this had not had an impact on inpatient utilization rates, then the findings may count against the hypothesis that knowledge of signs and symptoms is important. If, however, one finds that the intervention did not actually *change* peoples' knowledge of early signs and symptoms, then the negative evidence is not sufficient to rule out the causal hypothesis. Instead, better ways of changing people's knowledge would have to be developed.

Strength and Integrity of Interventions

Too little attention has been paid to the strength of socio-psychological interventions such as therapies, rehabilitation

programs, and the like (Sechrest, West, Phillips, Redner, and Yeaton, 1979). When one considers the nature of many problems that need to be resolved, e.g., their severity, their long history, the number of conditions supporting their continuation, many interventions that have been tried and tested may appear woefully weak. It is also possible that an intervention that might be reasonably strong for persons with some characteristics might be quite weak for persons of a different kind. Some of the characteristics associated with race and ethnicity may be among those related to relative strengths of interventions. For example, persons in some groups may, on average, be in worse condition than those in other groups by the time they end up in treatment. They may, therefore, need stronger interventions, and any simple test of effectiveness of some intervention may be misleading. Or, persons from some backgrounds may lack supporting resources that would facilitate treatment. In any case, however, it is likely to be more productive to try to assess the characteristics that determine the strength of treatment needed than simply to suppose that because persons are in some identifiable group they share in all the characteristics of that group.

It is also important that attention be paid to the "integrity" of interventions, i.e., that they are actually carried out as planned. As Sechrest, et al. (1979) indicate, many interventions that seem quite good in conception are so poorly implemented that no conclusions about their efficacy are warranted. Interventions may not be equally well implemented in all locations or with all groups in society, and, therefore, what appear to be differences in effectiveness between groups may simply represent variations in treatment integrity. Moreover, it may even be the case that observed differences in effectiveness between interventions reflect the differential adequacy with which the interventions are carried out. The solution, as with other variables we are discussing, is to assess the actual characteristics of interventions, e.g., how many sessions, whether sessions are actually held, whether clinicians have prescribed training. One may then develop measures that can be used in analyses to cast light on the meaning of other results

Considerations for Measuring Cultural Appropriateness and Cultural Competence in Interventions

As Lopez (1997) points out, cultural competence, cross-cultural competence, cultural appropriateness, and cultural sensitivity all concern the "ability to treat people of diverse cultural backgrounds in ways that respect, value and integrate their sociocultural context" (p. 570)

> Cultural competence. A set of practice skills, behaviors, attitudes, and policies that come together to enable a system, agency, or professionals to work effectively with members of diverse cultures.

It is likely to be difficult to distinguish cultural competency from general sensitivity to individual differences. Any given person or group has multiple "social addresses" (Bronfenbrenner, 1986). Which of those identities will be salient or important at any given time will be dependent on the particular circumstances or context of a situation or interaction. Thus, a person might be culturally sophisticated but not in the way made critical by a particular interaction. For example, a black, female, small business owner might not intrinsically be helped at all by being "matched" to a black, male service provider from a working class background. In

addition to black ethnicity, it might be that sex, socio-economic status, or business orientation might be important, or even more important, in the example described.

Having said that, there is value in being sensitive to the specific needs, values and experiences of ethnically and culturally diverse clients. Incorporating cultural values in programs may increase the credibility and perceived relevance of those programs for some participants (Terrell, 1993). Potential increases in self-esteem and ethnic pride may be particularly important for groups that face discrimination and negative stereotyping. We thought it interesting in our work with Hispanic veterans that they were greatly pleased with printed materials in Spanish even though none of them chose to use the Spanish versions.

What may be required, though, is not so much specific cultural knowledge as a developed sensitivity to and tolerance for the fact that people are different in many interesting ways, some of which are moderately predictable from group characteristics (social addresses). If that is so, then training for cultural competence may be better if it is broadly conceived and directed rather than oriented to the acquisition of specific knowledge about cultural habits and traditions.

Even if it is believed that specific training in culture is desirable, cultural competence needs to include awareness of the possibility that for any given person at any given time, one or more of many social identities may be more important than what is usually termed culture, and also that a particular individual may not adhere to what are seen as cultural norms.

Lopez (1997) describes the importance of considering individual variation of underlying value orientations:

"One therapist described in the following case summary how she considered the client's cultural background:

'In my work with a particular Hispanic female, my judgment of her ego-strength was quite different than it would have been had I not taken into account cultural patterns which 'condoned' the male being unfaithful and having other relationships. Accepting this practice is not considered a deviant choice in a female of the Hispanic culture.' (Lopez & Hernandez, 1986, p. 603)

In this example, it is not clear how this practitioner knew that the client accepted extramarital affairs as part of her cultural norm. Given the great heterogeneity among Latinos, there are many women and men who do not hold this cultural norm. Thus whereas it is important to consider culture-specific norms in clinical evaluation, it is equally important to assess the client's adherence to the presumed cultural behavior pattern. " (pg. 571-572) Or, as we might put it, a therapist could make a big mistake by assuming that "Oh, she's a Hispanic, so she doesn't mind her husband running around with other women."

Cultural competence requires a thorough understanding of the local population being served by an organization and ascertainment of what cultural and ecocultural factors are likely to be at issue. For example, we are acquainted with one American Indian case manager who presents to her co-workers a slide show demonstrating the living conditions of veterans on the reservation and practical considerations limiting access to services. It is not likely, though, that cultural competence can be broadly "manualized," as the example from Lopez (1997) illustrates. Providing effective mental health services requires developing a

unique and complex relationship with each client. Replacing individual evaluations with group-based generalizations can be limiting and promote stereoptyping.

Attempts at improving the effectiveness of mental health services through increasing cultural competence may address the characteristics of individual providers, settings, or systems. For example, individual providers may be trained to listen for certain cultural themes during early contacts with clients, settings may adjust their ways of operating, such as hours open, to meet the needs of different cultural groups, and systems may adapt their service philosophies so as to become more hospitable, e.g., by coordinating efforts with those of native healers or taking account of family structures (Goleman, 1995).

MEASURING CULTURAL COMPETENCY

Just how one might measure cultural competency is not clear. Presumably it ought to be reflected in understanding of cultural issues, which might include both general and specific sensitivities. That is, part of cultural competency should be a general sensitivity, and part of it should be knowledge of and sensitivity to local cultural concerns.

Santisteban and Newman (1998) have suggested four constructs that might prove useful to measure in considering cultural competency:

1. Basic competence in the treatment model.
2. Consideration of a person's value orientation.
3. Consideration of the family's major life experiences linked to ethnicity or culture.
4. Ease with which the service system works with people of diverse cultures.

The Mental Health Program of Western Interstate Commission for Higher Education (WICHE) is in the process of developing measures and benchmarks to assess "cultural competence" in managed mental health care. WICHE represents one organization of many companies attempting to develop cultural competence standards, guidelines, and indicators. Measuring components of the intervention itself is congruent with the whole approach of explicating the processes and mechanisms believed to underlie the differences in outcomes that have traditionally been found between ethnic groups.

For information on their cultural competence standards, contact:

Western Interstate Commission for Higher Education (WICHE)

P.O. Box 9752 Boulder, CO 80301-9752

Telephone: (303) 541-0200

A question of no small importance is how and to what extent cultural competence should be related to outcomes of services. There tends to be an assumption that cultural competence should result in increasing access to and satisfaction with services, as well as more appropriate diagnosis and treatment. Presumably those are mediators by which there will be increasing compliance and subsequent improved outcomes. In that case, successful service delivery programs, i.e., as manifested by good outcomes across populations, may be taken to be by definition culturally competent. If, however, service outcomes are less successful than seems

acceptable, then issues of cultural competence and the necessity to measure them come to the fore.

Chapter 6: Implications for Analysis and Interpretation

The approach to ecocultural research that we have outlined requires a different orientation to data analysis than the traditional between-groups t-test and ANOVAs. Detailed discussion of data analytic techniques is beyond the scope of this toolkit, but we will discuss useful approaches and suggest further readings. Again, part of being a critical multiplist is involving a multidisciplinary research team, and including a data analyst schooled (or willing to become schooled) in sophisticated techniques on that team can be extremely valuable.

Small Data Sets

The problem with defining more and more conditions on the sample to be studied sometimes results in a very small population or data set, e.g., "schizophrenic Cherokee adults."

Small samples pose difficult problems in both data analysis and interpretation. Many approaches to data analysis, e.g., factor analysis, are usually not feasible with small samples, or even relatively small samples because any estimates obtained are likely to be unstable. Moreover, if estimates need to be subjected to statistical significance testing, error terms are often too large to permit any useful test. Interpretation of findings from small samples may be questionable also on the grounds of lack of representativeness of any small number of cases. It scarcely seems likely, for example, that a sample of 30 or 40 American Indians could be taken as representative of Indians in general.

On the other hand, researchers should not simply give up in the face of small samples. In the first place, if investigators know that they are likely to be faced with the problem of a small number of cases, they should take extra care in data collection so as to maximize quality of data. It is often very helpful, also, to obtain as many measures as possible on each case: measure more variables with more instruments more often. That multiplicity will enhance the dependability of the measures and, hence, the stability of estimates obtained from them. Even multi-variate statistics may be useful with small samples if the data are highly dependable.

Starting with the strongest possible theory and aiming toward confirmatory, rather than simply exploratory, analyses will also be helpful in making sense out of data from small samples. If the theory is strong, then it is useful also to involve expert judges who can examine data for consistency and trends without knowing actual results of analyses. If both statistics and informed judges arrive at the same conclusions as to what the relationships between variables should be the findings are likely to be considered more persuasive.

Finally, although it may be difficult to think of small samples as representative of large populations, those samples may be fairly highly representative for some characteristics, even if they are not for all variables of interest. Some characteristics of interest may be fairly homogeneous within a population, some populations may be fairly homogeneous, and some mental and social processes may be relatively homogeneous. The precision of estimates obtained from a sample do not depend on the size of the population from which the sample is obtained but upon the population itself and the way the sample is drawn. In health research, no one would think a sample of 30 or 40 obstetricians to be a particularly small sample for many purposes. We rather imagine that a sample of, let us say, 30 or 40 Aleuts could be regarded as a reasonable sample for many kinds of studies. Moreover, if one wanted to study dietary

preferences of Aleuts living in isolated villages, even smaller samples than 30 might be quite sufficient.

The main point we would like to get across is that small samples are often unavoidable, and when they must be dealt with, we should try to get as much information as possible from them.

Qualitative Research

Qualitative techniques can provide important information in beginning to unpack proxy variables. Focus groups, interviews, case studies and the like conducted with consumers and service providers can be used to develop theories, hypotheses, and measures. These often provide good forums for soliciting input on the design and conduct of studies and interventions from the consumers' perspective, especially from consumers who may be less familiar with survey and other pencil-and-paper investigational techniques. Qualitative research is, however, still research. It can, and should, be carried out in a rigorous manner with attention paid to how the data is collected, and by whom, and how it is synthesized and reported. Some inquiries into the conduct of qualitative research have indicated that the prescriptions for such research have not been adhered to well. The following references provide some guidance on the conduct and reporting of qualitative research.

Ianni, F. A. J., & Orr, M., T. (1979). Toward a rapprochement of quantitative and qualitative methodologies. In T. D. Cook & C. S. Reichardt (Eds.*), Qualitative and Quantitative Methods in Evaluation Research*.

Krueger, R. A. (1994). *Focus Groups: A Practical Guide for Applied Research*. (Second ed.). Thousand Oaks: SAGE Publications.

Sechrest, L. & Sidani, S. (1995). Quantitative and qualitative methods: Is there an alternative? *Evaluation and Program Planning, 18*(1), 77-87.

Sechrest, L., Stickle, T., Stewart, M. & Sidani, S. (1996) *Effective and Persuasive Case Studies*. Cambridge, MA: The Evaluation Center at Human Services Research Institute.

Strauss, A., & Corbin, J. (1990). *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. Newbury Park: SAGE Publications.

Yin, R. (1994). Discovering the future of the case study method in evaluation research. *Evaluation Practice,* 15(3), 283-290.

Data Aggregation

Bollen and Lennox (1991) point out that, in order to produce research that is truly interpretable and explanatory of the processes underlying the results, researchers should strive to incorporate in their studies appropriate measurement models that explicitly outline measures of the constructs of interest and the errors of those measurements. The development and testing of measurement models allows for an estimate of the reliability of measurement and makes clear what constructs and measures have gone into any particular study, which can facilitate comparison of results between studies. As we have stressed, data aggregation is key in helping to improve the reliability of the measures of ecocultural variables that are currently available.

One technique that is useful for assessing the reliability of the measures we are using, and for aggregating those measures, too, is *confirmatory factor analysis* (CFA). CFA provides an estimate of how well the measures selected tap into some common underlying factor by examining the patterns of correlations amongst the measures. Subsequent analyses can use the estimated value of the underlying construct rather than the scores on the individual measures. Different levels of the underlying, or *latent*, factor are assumed to produce different measured values on the instruments. Measures that correlate highly tend to measure the same construct; those that do not may be tapping in to a different construct.

For instance, instruments selected to measure familism, but that do not correlate well, call into question the idea that they are all indicators of the same underlying construct. Items that ask about how often one spends time with family members may be measuring, instead of familism, resources for travel (for people who live quite a distance away from their families), or something about the spouse's sense of familism (if he/she refuses to spend time with the family). Neither of these latter constructs need necessarily be correlated with the participant's own sense of importance placed on family relations or obligations, just on his/her ability to fulfill them.

CFA is not the only technique for data aggregation. It is usually only appropriate with larger sample sizes (for which N is greater than 100, or so) and when the measures are *expected* to correlate. If a study were interested not in the sense of familism that a participant had, but rather his/her actual time spent with family, then it would probably be appropriate simply to combine the measures of time with siblings, with parents, with extended family, etc. rather than to ask whether those are correlated with one another.

Developing such indices should not be done unthinkingly. One needs to consider such issues as how to weight the various items and how to score them. The following references can help guide thinking about index construction.

Bollen, K., & Lennox, R. (1991). Conventional wisdom on measurement: A structural equation perspective. *Psychological Bulletin, 110*(2), 305-314.

Byrne, B. M. (1994). *Structural Equation Modeling with EQS and EQS/Windows: Basic Concepts, Applications, and Programming*. Thousand Oaks: SAGE Publications.

Gorsuch, R. L. (1983). *Factor Analysis*. (Second ed.). Hillsdale: Lawrence Erlbaum Associates.

Loehlin, J. C. (1992). *Latent Variable Models: An Introduction to Factor, Path, and Structural Analysis*. (Second ed.). Hillsdale: Lawrence Erlbaum Associates

Pedhazur, E. J., & Schmelkin, L. (1991). *Measurement, Design, and Analysis: An Integrated Approach*. Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.

LONGITUDINAL DESIGNS

Longitudinal studies can be seen as a type of data aggregation across time (see *Choose Reliable Measures* section in Chapter 4). Having repeated measures of some measures allows for a better estimate of stable characteristics and of change. Longitudinal designs also allow for the study of dynamic models, such as how variation in ecocultural variables within people (over time) and between people relates to variation in outcomes.

Longitudinal data have traditionally been analyzed with repeated measures analysis of variance (MANOVA). However, MANOVA has the disadvantage of assuming a balanced design (that is, the

same number in each group at each time point), which may not be feasible when there are subjects with missing data, especially when the sample size is small. Also, MANOVA designs assume that there is homogeneity of treatment effects within groups, that is, that everyone in one group responds the same to the intervention. Growth curve analyses do not have these restrictive assumptions and can allow for the study of intra-individual as well as between group change.

Collins, L. M. (Ed.). (1991). *Best Methods for the Analysis of Change: Recent Advances, Unanswered Questions, Future Directions*. Washington, DC: American Psychological Association.

Petrinovich, L., & Widaman, K.F. (1984). An evaluation of statistical strategies to analyze repeated-measures data. In Peeke, H.V.S., and Petrinovich, L. (eds.), *Habituation, sensitization and behavior*. New York, NY: Academic Press.

Rogosa, D., & Saner, H. (1995). Longitudinal data analysis examples with random coefficient models. *Journal of Educational & Behavioral Statistics*, 20(2), 149-170.

Rogosa, D., & Willet, J. (1985). Understanding correlates of change by modeling individual differences in growth. *Psychometrika*, 50, 203-228.

Stoolmiller, M. (1995). Using latent growth curve models to study developmental processes. In J. Gottman (Ed.), *The Analysis of Change*. New Jersey: Lawrence Erlbaum Associates

Regression, Path and Structural Models

Besides developing models and analyses that assess how well the constructs of interest have been measured, one should develop models that show the relationships amongst the constructs (see *Theory Construction* section in Chapter 3). If one is only concerned with the direct effects, or moderated effects, of some variable or set of variables on an outcome, then regression techniques are often sufficient. But we have urged the development of more complicated models that include mediators, or mechanisms, in the model (*Mediating variables*, Chapter 3). In order to examine these sorts of models, path and structural analyses should be employed. These analyses allow for examining indirect effects of one variable upon another *through* the mediating variables.

In addition, ecocultural mental health services studies often involve *hierarchical designs*, that is, they have different levels of analysis, in which the upper levels subsume the lower levels (called "nesting"). For instance, a study might have consumers nested within providers nested within programs, or programs nested within cities nested within states. Hierarchical analyses allow for assessing the effect that variation in each level has on the outcomes of interest.

Nearly all analyses involving testing for differences between groups involve some sort of hierarchical (nested) model in that individuals belong to one group or another. Individuals are nested within race/ethnic groups, for example. If one wants to determine differences between groups, it is first necessary to consider the individual characteristics of persons making up those groups.

Aiken, L. S., & West, S. G. (1991). *Multiple Regression : Testing and Interpreting Interactions*. Newbury Park, Calif.: Sage Publications.

Baron, R., & Kenny, D. (1986). The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.

Bryk, A. S., & Raudenbush, S. W. (1992). *Hierarchical Linear Models. Applications and Data Analysis Methods*. Newbury Park, CA: Sage Publications.

Byrne, B. M. (1994). Structural Equation Modeling with EQS and EQS/Windows: Basic Concepts, Applications, and Programming. Thousand Oaks: SAGE Publications.

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Hocking, R. R. (1996). Methods and applications of linear models: Regression and the analysis of variance. New York: John Wiley and Sons, Inc.

Loehlin, J. C. (1992). *Latent Variable Models: An Introduction to Factor, Path, and Structural Analysis*. (Second ed.). Hillsdale: Lawrence Erlbaum Associates

McArdle, J. (1996). Current directions in structural factor analysis. *Current Directions in Psychological Science, 5*(1), 11-18.

Presentation and Community Involvement

The concept of participation varies from limited roles to highly involved partnership in the creation, execution, and analysis of evaluation projects. At one extreme, subjects may have no other role then to receive an intervention and be monitored. Though appropriate in some contexts, many projects suffer from low participation, inaccurate descriptions of the problem affecting the community, and poorly designed measurements and interventions. The term 'stakeholder' gives special importance to clearly and specifically identifying the people who can benefit from an evaluation (Patton, 1997). This approach moves beyond detailed audience analysis to the generation of personally vested interest and commitment to a project.

> Never underestimate the intelligence of the public, and never overestimate its knowledge. Anonymous

Community involvement is a crucial source of knowledge about and access to a select collection of individuals. It is very easy to take such information to complete a project, then create a report, which only is read by the funding agency. If few organizations return to communities to present the results of their research projects, this can leave behind a feeling of exploitation in the target community and resentment toward the research collective. In response to this concern, some researchers have taken a facilitative approach to evaluation, designing projects to help people help themselves. This kind of empowerment evaluation forces the adoption of a collaborative and participatory approach however it meets a specific need and is not appropriate for all program evaluations.

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Appendix 1 : Scales Employed to Measure Constructs

Scales Included with the Toolkit

Note: The scales presented have been reformatted for space efficiency. Generally, the scoring parameter has been placed at the beginning of the section, followed by all the items in the scale.

Group Identification

Black Racial Identity Attitude Scale—Form B

Helms, J. E. (1990). *Black and White Racial Identity: Theory, Research, and Practice*. New York: Greenwood Press.

What theory (if any) does the scale test? What is the purpose?

Within-group variance exists in racial-ethnic groups (i.e., groups are not homogeneous). The BRIAS-Form B attempts to operationalize Cross' 4-stage model of "Nigrescence", or Negro-to-Black conversion. In his model, Cross explains different levels of racial identity among members of the black community according to stages: Preencounter, Encounter, Immersion-Emersion, and Internalization. This scale is a short form of the RIAS, which examined the same stages.

Examine the Face Validity of Subscales and Individual Items:

Items from each subscale relate to the defining features of each stage. Items in the Preencounter subscale measure the degree of adoption of Euro-American world views and behaviors and devaluation of Black culture. Items from the Encounter subscale assess the extent to which (1) a critical personal experience has challenged an individual's current world view and (2) an individual has become receptive to new world views and has begun to search for a new identity. The Immersion-Emersion subscale estimates psychological withdrawal and immersion into black experiences and culture (i.e., how much the individual discredits "Whiteness" and idealizes "Blackness"). The Internalization subscale the individual's self-confidence and security with his or her Black identity.

What Statistical Procedures has the Scale been Subjected to? What are the psychometric properties?

Ponterotto & Wise (1987) conducted an exploratory factor analysis of the RIAS with principal axis factoring and oblique rotation of the factors. They found a three-factor solution supporting defined as the Pre-encounter, Immersion-Emersion, and Inernalization subscales. Yanico, Swanson, & Tokar (1994) conducted item, subscale, and factor analyses on the BRIAS-Form B—the 30-item short form of the RIAS. The authors used the Form B scoring procedures in their analyses and correlated these scores with scores obtained by implementing Form A scoring procedures. They found that scoring procedures for Version A and Version B were not equivalent. The Preencounter subscales from each version share 89% of the items with a correlation coefficient of .97. The Internalization subscales have only 22% of items in common with a correlation coefficient equal to .24. One should not use Versions A and B interchangeably!

Intercorrelations among the scales varied from -.28 between the Preencounter and Internalization subscales to .67

between the Encounter and Immersion/Emersion subscales. Using exploratory factor analysis, the authors identified the Preencounter, Immersion-Emersion, and Internalization factors, or subscales. The Preencounter subscale accounted for 5.9% of the variance with an alpha coefficient equal to .59; the Immersion-Emersion subscale accounted for 10.1% of the variance with an alpha coefficient equal to .63; and the Internalization subscale accounted for 4% of the variance with an alpha coefficient equal to .59. One ought to divide the BRIAS-Form B into these subscales rather than those indexed in the original version.

One major caveat worth mentioning is the likelihood that the items for the BRIAS share little common variance: the factors accounted for only a small proportion of the overall variance (i.e., 20%) in the scale and produced modest internal consistencies. Additionally, plots of the Preencounter and Internalization subscales' items and overall subscale scores revealed highly skewed distributions.

BRIAS Social Attitudes Scale (Revised)

Janet E. Helms

Instructions: This questionnaire is designed to measure people's attitudes about social and political issues. There are no right or wrong answers. Different people have different viewpoints. So, try to be as honest as you can. Beside each statement, circle the number the best describes how you feel. Use the scale below to respond to each statement.

(circle here)

1	2	3	4	5
Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

1. I believe that being black is a positive experience.
2. I know through my personal experiences what being Black in America means.
3. I am increasing my involvement in Black activities because I don't feel comfortable in White environments.
4. I believe that large numbers of Blacks are untrustworthy.
5. I feel an overwhelming attachment to Black people.
6. I involve myself in causes that will help all oppressed people.
7. A person's race does not influence how comfortable I feel when I am with her or him.
8. I believe that White people look and express themselves better than Blacks.
9. I feel uncomfortable when I am around Black people.
10. I feel good about being Black, but do not limit myself to Black activities.
11. When I am with people I trust, I often find myself referring to Whites as "honkies", "devils", "pigs", "white boys", and so forth.
12. I believe that being Black is a negative experience.
13. I believe that certain aspects of "the Black experience" apply to me, and others do not.
14. I frequently confront the system and the (White) man.
15. I constantly involve myself in Black political and social activities (such as art shows, political meetings, Black theater, and so forth).
16. I involve myself in social action and political groups even if there are no other Blacks involved.
17. I believe that Black people should learn to think and experience life in ways that are similar to White people's ways.
18. I believe that the world should be interpreted form a Black or Afrocentric perspective.

19. I am changing my style of life to fit my new beliefs about Black people.
20. I feel excitement and joy in Black surroundings.
21. I believe that Black people came from a strange, dark, and uncivilized continent.
22. People, regardless of their race, have strengths and limitations.
23. I find myself reading a lot of Black literature and thinking about being Black.
24. I feel guilty or anxious about some of the things I believe about Black people.
25. I believe that a Black person's most effective weapon for solving problems is to become part of the White person's world.
26. I speak my mind about injustices to Black people regardless of the consequences (such as being kicked out of school, disappointing my parents, being exposed to danger).
27. I limit myself to Black activities as much as I can.
28. I am determined to find my Black identity.
29. I believe that White people are more intelligent than Blacks.
30. I believe that I have many strengths because I am Black.
31. I feel that Black people do <u>not</u> have as much to be proud of as White people do.
32. Most Blacks I know are failures.
33. I believe that White people should feel guilty about the way they have treated Blacks in the past.
34. White people can't be trusted.
35. In today's society if Black people don't achieve, they have only themselves to blame.
36. The most important thing about me is that I am Black.
37. Being Black just feels natural to me.
38. Other Black people have trouble accepting me because my life experiences have been so different from their experiences.
39. Black people who have any White people's blood should feel ashamed of it.
40. Sometimes, I wish I belonged to the White race.
41. The people I respect most are White.
42. A person's race usually is not important to me.
43. I feel anxious when White people compare me to other members of my race.
44. I can't feel comfortable with either Black people or White people.
45. A person's race has little to do with whether or not he or she is a good erson.
46. When I am with Black people, I pretend to enjoy the things they enjoy.
47. When a stranger who is Black does something embarrassing in public, I get embarrassed.
48. I believe that a Black person can be close friends with a White person.
49. I am satisfied with myself.
50. I have a positive attitude about myself because I am Black.

JEWISH RATING SCALE (JRS)

Dor-Shav, Z. (1990). Development of an ethnic self-definition: The ethnic self-concept "Jew" among Israeli children. *International Journal of Behavior Development, 13*(3), 317-332.

What theory (if any) does the scale test? What is the purpose?

Use of an ethnic language cannot entirely provide the basis for ethnic self-identity. The JRS measures definitions of the self as "Jew" (the ethnic component of the self) as a function of the Piagean progression from intuitive pre-operations through formal operations.

Examine the Face Validity of Subscales and Individual Items:

This scale is administered as a structured questionnaire with criterion questions "Why are you a Jew? What makes you a Jew?" It discriminates between eight-levels of children's modes of self-identification as Jewish. Children's verbal responses are coded according to scale levels: Intuitive Egocentric (Non-Definition Level), Intuitive Sociocentric, Concrete Egocentric I, Concrete Proximally Sociocentric I, Concrete Distally Sociocentric I, Concrete Egocentric II, Concrete Sociocentric II, and Formal. These levels are defined by patterns of changes in time resulting from sequential cognitive and intellectual development. Each level represents one of four modes (i.e., Intuitive—no self-definition, Concrete I, Concrete II, and Formal) and one of two orientations (i.e., egocentric vs. sociocentric).

What Statistical Procedures has the Scale been Subjected to? What are the psychometric properties?

"Unfortunately, the conditions of scoring did not allow for the testing of rater reliability. Nonetheless, the printed coded system of ratings used assured uniformity" (Dor-Shav, 1990, p. 326). Given this information, it seems apparent that researchers have not yet adequately tested the psychometric properties of the JRS. Before using the JRS as a measure of self-identity to predict relevant outcomes, researchers ought to study the inter-rater reliability as well as the validity of the instrument.

Structured Interview

Why are you a Jew?

What makes you a Jew?

Additional questions designed to test the logical consistency of the first response were asked of all children. Before a final rating was assigned each child may have been asked the criteria questions as many as four times with intervening questions, such as: "Is it possible to be a Jew without .. (whatever the child had said)?" "Who is not a Jew according to your opinion?" "Can a person cease being a Jew?" "Can an Arab be a Jew (without converting)?" "Can a Christian be a Jew?" The children were also asked whether and how, by observation alone, they could identify a stranger as a Jew or non-Jew.

Coding scale

Sample verbal responses defined and coded at each of the scale levels are presented below – in stylized language—based upon free translation from the children's Hebrew responses.

0. Intuitive Egocentric (Non-definition Level): The child asserts his Jewishness intuitively, simply announcing that that is how it is – "Because!" "So!" "That is how I was born."

1. Intuitive Sociocentric: The child aserts his Jewishness intuitively as a result of his physical presence within the Jewish milieu – "My family is Jewish so I , too , am Jewish." "I was born in Israel (i.e. on Jewish soil)."

2. Concrete Egocentric I: The child determines his Jewishness on the basis of his perceived similarity to others in his family, but does not see his family as part of a larger society – "My Father is a Jew." "My mother is a Jewess".

3. Concrete Proximally Sociocentric I: The child determines his Jewishness on the basis of his being part of a family or geographical unit which is one of many other such units in his country, nationality or society – "I have Jewish parents." "I am living in Israel."

4. Concrete Distally Sociocentric I: The child determines his Jewishness on the basis of his being like others as defined by a societal institution, The Jewish *Halachah* (the authorized Jewish L*aw as codified by the Rabbis in the Code of Jewish Law*) – "Any child born of a Jewish mother is Jewish".

5. Concrete Egocentric II: The determines his Jewishness on the basis of his being like others and behaving, personally, in a Jewish-like behavior – "I recite my prayers regularly." "I am kind and nice". "I do good deeds (associated in the child's eyes with performing *mitsvot*, i.e. commandments)."

6. Concrete Sociocentric II: The child determines his Jewishness on the basis of his being like others and having his behavior determined by the rules of Jewish society – "I follow the *mitsvot* of the *Torah*".

7. Formal: The child determines his Jewishness by a personal affirmation of the belief system of the Jew – "I believe in the Lord." "I believe in the *Torah*".

The progression from level 1 – dealing with the "single" psychological unit of the child's milieu – may be seen as a progression of psychological units as follows: level 2 adds "the family"; level 3 sees "the family as part of a society"; level 4 adds "a society with social institutions"; level 5 relates "personal behaviour" to the above; level 6 sees the "*system* of personal behaviours"; and level 7 relates the "system to a *theology*".

MULTIDIMENSIONAL RACIAL IDENTITY SCALE (MRIS)-REVISED

Thompson, V. L. (1995). The multidimensional structure of racial identification. *Journal of Research in Personality, 29*, 208-222.

What theory (if any) does the scale test? What is the purpose?

Racial (ethnic) identity among Black people, or African Americans, is a multidimensional construct. The scale attempts not only to provide a general assessment of strength of group identification, but also to measure this identity along specific parameters, or dimensions.

Examine the Face Validity of Subscales and Individual Items:

The MRIS-R consists of four subscales, or factors: a *psychological* factor, a *physical* factor, a *cultural* factor, and a *sociopolitical* factor. Items within the *psychological* factor address issues related to (1) commitment to, (2) attachment to and (3) concern for black people and the African American community. Items that make up the *physical* factor assess the acceptance of physical features typically associated with blacks and African Americans. Items from the *cultural* factor measure attitudes toward black and African literature, music, and art. Items within the *sociopolitical* factor measure the individual's awareness of and beliefs about the caste of blacks and African Americans.

What Statistical Procedures has the Scale been Subjected to? What are the psychometric properties?

Myers & Thompson (1994) subjected the initial MRIS to an exploratory factor analysis. Using the Kaiser-Gutman rule, this analysis yielded a four factor solution (i.e., factors with eigenvalues greater than one were retained). Coefficient alphas for the scales were not discussed. The four factors accounted for 78

percent of the variance present in the instrument. Within these factors, items with semi-partial correlations greater than .30 were kept. To test the discriminant validity of the scale, the authors computed a correlation matrix between factors in the African Self-Consciousness Scale (Baldwin & Bell, 1985) and factors in the MRIS. Several scales correlated with each other; however, no correlation was greater than .40.

In 1995, Thompson performed a confirmatory factor analysis on the MRIS-R to test the hypothesized multidimensional factor structure of the scale. With one exception, factor loadings were at least .45 for individual items within each theoretical factor. Items did not load more highly onto factors to which they did not theoretically belong. The internal consistency reliability coefficient was .88. The coefficient alphas for subscales were psychological (.86), physical (.75), cultural (.85), and sociopolitical (.62).

The author calculated the test-retest reliability for the total scale to be .96. For individual factors, the test-retest reliabilities were psychological (.90), physical (.89), cultural (.92), and sociopolitical (.89). The factor intercorrelation matrix revealed that the factors were correlated, yet unique. The largest correlation was .59, and the smallest was .15.

Sanders-Thompson, V. (1995). ID #_____

AFRICAN-AMERICAN RACIAL IDENTITY SCALE

Please complete the following items as accurately as you can.

1. I feel that it is unacceptable/inappropriate to wear natural hairstyles (afro, braids, etc.) to work.

STRONGLY AGREE	AGREE	SOMEWHAT AGREE	NEUTRAL	SOMEWHAT DISAGREE	DISAGREE	STRONGLY DISAGREE

2. I am committed to changing the job, wage, and/or housing discrimination African Americans/ Blacks experience.
3. I feel that it is unacceptable/inappropriate to wear natural hairstyles (afro, braids, etc.) to work.
4. I am committed to changing the job, wage, and/or housing discrimination African Americans/ Blacks experience.
5. Most African Americans/Blacks are trying to exhibit African American/ Black culture when they wear African style clothing and natural hairstyles.
6. I would prefer a lighter, fairer spouse or partner to a darker or browner partner.
7. African Americans/Blacks concentrate too much on race and not enough on qualifications where jobs, business, and politics are concerned.
8. I am comfortable with African American/Black links to African culture.
9. African Americans/Blacks are more attractive when their features appear less African and more "mixed."
10. African Americans/Blacks are too negative when considering progress and opportunity in America.
11. I feel it is important for me to keep up with issues important to the Black?African American community.
12. It is hard for me to trust African Americans/Blacks in business dealings, politics, etc.
13. I have a strong attachment to other African American/Black people.
14. I am very concerned about the problems African Americans/ Blacks have.

15. African Americans/Blacks have more ties to American culture than to African culture.
16. I am committed to increasing Black/African American representation in all occupations.
17. I would prefer a lighter child with a slender nose to a darker child with a broader nose.
18. I feel it is unacceptable/inappropriate to wear natural hair styles (afro, braids, etc.) at formal and/or racially mixed social functions.
19. The history, contributions, and role of African Americans/Blacks in society should be documented and taught to everyone.
20. Blacks/African Americans who have lighter or fairer skin tones are generally better looking than those with darker or browner skin tones.
21. Black/African American attitudes and behavior interfere with B/A progress in America.
22. African Americans/Blacks concentrate too much on race and not enough on hard work.
23. African Americans/Blacks with a slender nose are more attractive than those with broader, flatter noses.
24. I am proud to be African American/Black.
25. I feel a committment to the African American/Black community.
26. African Americans/Blacks have no culture separate from American culture.
27. African Americans/Blacks expect this country to do too much for them (in terms of jobs, education, and welfare) and need to work harder.
28. There is enough opportunity in America but African Americans/Blacks do not benefit because they are not motivated to do well.
29. African Americans/Blacks need more polital representation in offices like U.S. Senate seats, Governorships, and Presidential appointments.
30. I am committed to strength and cohesion in the African American/Black family.
31. African Americans/Blacks with finer, slender features are more attractive than African Americans/Blacks with broader, coarser features.

MULTIGROUP ETHNIC IDENTITY MEASURE

Phinney, J. (1992). The Multigroup Ethnic Identity Measure: A new scale for use with adolescents and young adults from diverse groups. *Journal of Adolescent Research*, *7*, 156-176.

What theory (if any) does the scale test? What is the purpose?

This measure assesses the dimensions of ethnic identity relevant across ethnic groups among adolescents and young adults.

Examine the Face Validity of Subscales and Individual Items:

The MEIM consists of 14 items—the Affirmation/Belonging Subscale (5 items) measures positive ethnic attitudes and sense of belonging (i.e., ethnic pride); the Ethnic Identity Achievement Subscale (7 items) relates to ethnic identity achievement, including exploration and resolution of identity issues; and the Ethnic Behaviors Subscale (2 items) assesses ethnic behaviors or practices. Individuals rate items on a 4-point scale ranging from *strongly agree* to *strongly disagree*. Additional items (not included in the scoring) inquire about self-identification, ethnicity of parents, and other-group orientation.

What Statistical Procedures has the Scale been Subjected to? What are the psychometric properties?

Over a 5 year period, Phinney and others pilot tested and revised multiple drafts of the MEIM. In 1990, Phinney conducted a literature review of the major components of ethnic identity and revised the MEIM to arrive at the final version.

In a study published in 1992, she reported findings from an investigation in which she administered the scale to high school adolescents and young adults in college. She conducted separate

analyses for high school students and for college students. To identify the scale's reliability, Phinney computed reliability coefficients for the entire scale (.81 for the high school sample and .90 for the college sample) as well as for the Affirmation/Belonging subscale (.75 for the high school sample and .86 for the college sample), the Ethnic Identity Achievement Subscale (.69 for the high school sample and .80 for the college sample), and the Other-Group Orientation items (.71 for the high school sample and .74 for the college sample).

She then examined the factor structure of the scale using principle axis factor analysis with squared multiple correlations serving as the commonalities. The solution yielded two factors. Factor 1 included items designed to assess ethnic identity and Factor 2 consisted of items related to other-group orientation. Factor 1 accounted for 20% of the scale's explained variance in the high school sample and 30.8% in the college sample. Factor 2 accounted for 9.1% of the scale's explained variance in the high school sample and 11.4% in the college sample.

Phinney found that the scale discriminated among ethnic groups. Ethnic identity scores differed significantly among ethnic groups for high school students ($F[4,383] = 5.04$, $p < .001$) and for college students ($F[4,129] = 3.18$, $p < .05$). In addition, she found support for the theory of developmental process of ethnic identity achievement. College students scored higher on ethnic identity achievement that high school students ($t = 2.18$, $p < .05$).

Among the samples tests, the scale seems to measure ethnic identity as a single factor of three intercorrelated items (i.e., positive ethnic attitudes and sense of belonging, ethnic identity achievement, and ethnic behaviors).

Phinney, J. (1992)

The Multigroup Ethnic Identity Measure (MEIM)

In this country people come from many different countries and cultures, and there are many different words to describe the different backgrounds or ethnic groups that people come from. Some examples of the names of ethnic groups are Hispanic or Latino, Black or African American, Asian American, Native American or American Indian, Mexican American, and Caucasian or White. these questions are about your ethnicity or your ethnic group and how you feel about it or react to it.

Please fill in: In terms of ethnic group, I consider myself to be _____

Use the numbers below to indicate how much you agree or disagree with each statement.

(4) Strongly agree (3) Agree (2) Disagree (1) Strongly disagree

1- I have spent time trying to find our more about my ethnic group, such as its history, traditions, and customs.

2- I am active in organizations or social groups that include mostly members of my own ethnic group.

3- I have a clear sense of my ethnic background and what it means for me.

4- I think a lot about how my life will be affected by my ethnic group membership

5- I am happy that I am a member of the group I belong to.

6- I have a strong sense of belonging to my own ethnic group.

7- I understand pretty well what my ethnic group membership means to me.

8- In order to learn more about my ethnic background, I have often talked to other people about my ethnic group.

9- I have a lot or pride in my ethnic group.

10- I participate in cultural practices of my own group, such as special food, music, or customs.

11- I feel a strong attachment towards my own ethnic group.

12- I feel good about my cultural or ethnic background.

13- My ethnicity is

(1) Asian or Asian American, including Chinese, Japanese, and others

(2) Black or African American

(3) Hispanic of Latino, including Mexican American, Central American, and others

(4) White, Caucasian, Anglo, European American; not Hispanic

(5) American Indian/Native American

(6) Mixed; Parents are from two different groups

(7) Other (write in): _____

14- My mother's ethnicity is (use numbers above) _____

15- My father's ethnicity is (use numbers above) _____

WHITE RACIAL IDENTITY ATTITUDE SCALE

Helms, J. E. & Carter, R. T. (1990). Development of the White racial identity inventory. In J. E Helms (Ed.) *Black and White Racial Identity: Theory, Research, and Practice*, pp. 67-80. CT: Greenwood Press.

What theory (if any) does the scale test? What is the purpose?

The WRIAS attempts to operationalize Helms' (1984) theory of White racial identity. According to her theory, as Whites become racially conscious, they progress through two phases of development: Phase I (Abandonment of Racism), which includes the Contact, Disintegration, and Reintegration stages and Phase II (Defining a Nonracist White Identity), which consists of the Pseudo-independence, Immersion/ Emersion, and Autonomy stages.

Examine the Face Validity of Subscales and Individual Items:

The WRIAS is a self-report measure consisting of 50 items, each rated on a five-point Likert scale. They measure the attitudes associated with 5 of the 6 stages in Helms' model of racial identity development. The Contact subscale consists of items related to naivete about Blacks and racial differences. The Disintegration subscale assesses the amount of anxiety, depression, and guilt resulting from conflict between internal moral standards about past injustices against Blacks and fear of exclusion by White peers. The Reintegration subscale measures hostility and anger toward Black culture and positive biases toward White culture. The Pseudo-independence subscale identifies the degree of genuine curiosity about cross-racial relations, intellectualized acceptance of Blacks, and positive identification with one's Whiteness. Finally,

the Autonomy subscale indicates the amount of appreciation for racial differences and involvement in cross-racial interactions.

What Statistical Procedures has the Scale been Subjected to? What are the psychometric properties?

Swanson, Tokar, & Davis (1994) factor analyzed the psychometric properties and dimensionality of the WRIAS. They conducted an item analysis to measure internal consistency and homogeneity for each subscale. Correlations of items with their assigned subscale ranged from -.15 to .68. More than half (32) of the items correlated more high with other subscales than with their assigned subscale: correlations with other subscales ranged from -.63 to .68! Alpha coefficients ranged from .61 on the Contact subscale to .84 on the Integration subscale. Intercorrelations among the subscales varied from -.29 between the Contact and Disintegration subscales to .81 between the Disintegration and Reintegration subscales. Unfortunately, the exploratory-descriptive principal axis factor analysis yielded little support for the idea that the instrument represents and adequate operationalization of Helms' model. Each of the three-, five-, and six-factor solutions suggested nonunique factors.

In addition, the investigators trained 5 judges to examine the content of each WRIAS item and rationally assign items to the appropriate subscales in accordance with Helms' (1984) theory. The hit rate for judges ranged from 42% to 50%, evidencing little interjudge reliability in correct item assignment. The mean hit rate for the entire scale was 47.6%. Hit rates for individual subscales showed greater variability: 90% for Reintegration items, 64% for Autonomy items, 40% for Contact items, 28% for Disintegration items, and 16% for Pseudo-independence items. Mismatches between designated items and appropriate theoretical stages suggests that either the model or the instrument may need revisions to improve clarity and discrimination between specific stages. In the end, the authors did not find evidence for the psychometric adequacy of the WRIAS.

Helms, J. E. & Carter, R. T. (1990)

WRIAS Social Attitude Scale

Instruction: This questionnaire is designed to measure people's attitudes about social and political issues. There are no right or wrong answers. Different people have different viewpoints. So try to be as honest as you can. Beside each statement circle the number that best describes how <u>you</u> feel. Use the scale below to respond to each statement.

(circle here)

1	2	3	4	5
Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

1. I hardly think about what race I am.
2. I do not understand what Blacks want from Whites.
3. I get angry when I think about how Whites have been treated by Blacks.
4. I feel as comfortable around Blacks as I do around Whites.
5. I involve myself in causes regardless of the race of the people involved in them.
6. I find myself watching Black people to see what they are like
7. I feel depressed after I have been around Black people.
8. There is nothing that I want to learn from Blacks.
9. I seek out new experiences even if I know a large number of Blacks will be involved in them.
10. I enjoy watching the different ways that Blacks and Whites approach life.
11. I wish I had a Black friend.

12. I do not feel that I have the social skills to interact with Black people effectively.
13. A Black person who tries to get close to you is usually after something.
14. When a Black person holds and opinion with which I disagree, I am not afraid to express my viewpoint.
15. Sometimes jokes based on Black people's experiences are funny.
16. I think it is exciting to discover the little ways in which Black people and white people are different.
17. I used to believe in racial integration, but now I have my doubts.
18. I'd rather socialize with Whites only.
19. In many ways Blacks and Whites are similar, but they are also different in some important ways.
20. Blacks and Whites have much to learn from each other.
21. For most of my life, I did not think about racial issues.
22. I have come to believe that Black people and White people are very different.
23. White people have bent over backwards trying to make up for their ancestors' mistreatment of Blacks, but now it is time to stop.
24. It is possible for Blacks and Whites to have meaningful social relationships with each other.
25. I understand that White women and men must end racism in this country because White people created it.
26. I am curios to learn in what ways Black people and White people differ from each other.
27. I limit myself to White activities.
28. Society may have been unjust to Blacks, but it has also been unjust to Whites.
29. I am knowledgeable about which values Blacks and Whites share.
30. I am comfortable wherever I am.
31. In my family, we never talked about racial issues.
32. When I must interact with a Black person, I usually let him or her make the first move.
33. I feel hostile when I am around Blacks.
34. I think I understand Black people's values.
35. Blacks and Whites can have successful intimate relationships.
36. I was raised to believe that people are people regardless of their race.
37. Nowadays, I go out of my way to avoid associating with Blacks.
38. I believe that Blacks are inferior to Whites.
39. I believe I know a lot about Black people's customs.
40. There are some valuable things that White people can learn from Blacks that they can't learn from other Whites.
41. I think that it's okay for Black people and White people to date each other as long as they don't marry each other.
42. Sometimes I'm not sure what I think of feel about Black people.
43. When I am the only White in a group of Blacks, I feel anxious.
44. Blacks and Whites differ from each other in some ways, but neither race is superior.
45. I am not embarrassed to admit that I am White.
46. I think White people should become more involved in socializing with Blacks.
47. I don't understand why Black people blame all White people for their social misfortune.
48. I believe that White people look and express themselves better than Blacks.
49. I feel comfortable talking to Blacks.
50. I value the relationships that I have with my Black friends.

ACCULTURATION RATING SCALE FOR MEXICAN-AMERICANS (ARSMA)

Cuellar, I., Harris, L. C., & Jasso, R. (1980). An acculturation scale for Mexican-American normal and clinical populations. *Hispanic Journal of Behavioral Sciences, 2*, 199--217.

What theory (if any) does the scale test? What is the purpose?

The scale attempts to measure the adaptation of Mexican Americans into the American culture.

Examine the Face Validity of Subscales and Individual Items:

The ARSMA consists of items assessing (1) preferences for language usage, relationships, entertainment, and food, (2) ethnic identification and origin, (3) generational proximity and (4) bilingual abilities.

What Statistical Procedures has the Scale been Subjected to? What are the psychometric properties?

During the 1980s, researchers examining the psychometric properties of the ARSMA conducted exploratory factor analyses to determine the scale's factor, or dimensional, structure. Many of these individuals identified multiple orthogonal factors. They then summed responses to generate a final total score. This summation procedure violates the logic of factor analysis. Furthermore, extremely high coefficients of internal consistency have been reported for the ARSMA. Such high alpha coefficients suggest that identified factors may reflect sampling error rather than true score variations.

In an attempt to resolve these two problems, Dawson, Crano, & Burgoon (1996) conducted an analysis that has previously been used to revise scales with very high internal consistencies. First, the authors performed a principal components factor analysis. Evidence of a single factor solution supports the hypothesis that the identification of three factors has resulted largely from error. Having conducted the exploratory factor analysis, the authors applied the *Phi* approach. Each item was assessed for its discriminability, and a phi coefficient was calculated for the distribution of scores. The authors deleted items with phi coefficients less than .70, retaining only those items that discriminated well between high and low scorers. Ten items met the discriminating criteria: language spoken, language preferred, self-identity, music, TV, where raised, contact with Mexico, language think in, language read better, language write better. These items accounted for approximately 75 percent of the total variance in the instrument.

(Cuellar et al., 1980)

ACCULTURATION RATING SCALE FOR MEXICAN AMERICANS

1. What language do you speak?
    1. Spanish only
    2. Mostly Spanish, some English
    3. Spanish and English about equally (bilingual)
    4. Mostly English, some Spanish
    5. English only
2. What language do you prefer?
    1. Spanish only
    2. Mostly Spanish, some English
    3. Spanish and English about equally (bilingual)
    4. Mostly English, some Spanish
    5. English only
3. How do you identify yourself?
    1. Mexican

2. Chicano
3. Mexican American
4. Spanish American, Latin American, Hispanic American, American
5. Anglo American or other

4. Which ethnic identification does (did) your mother use?
   1. Mexican
   2. Chicano
   3. Mexican American
   4. Spanish American, Latin American, Hispanic American, American
   5. Anglo American or other

5. Which ethnic identification does (did) your father use?
   1. Mexican
   2. Chicano
   3. Mexican American
   4. Spanish American, Latin American, Hispanic American, American
   5. Anglo American or other

6. What was the ethnic origin of the friends and peers you had, as a child up to age 6?
   1. Almost exclusively Mexicans, Chicanos, Mexican Americans (LA RAZA)
   2. Mostly Mexicans, Chicanos, Mexican Americans
   3. About equally Raza (Mexicans, Chicanos, or Mexican Americans) and Anglos or other ethnic groups
   4. Mostly Anglos, Blacks, or other ethnic groups
   5. Almost exclusively Anglos, Blacks, or other ethnic groups

7. What was the ethnic origin of the friends and peers you had, as a child from 6 to 18?
   1. Almost exclusively Mexicans, Chicanos, Mexican Americans (LA RAZA)
   2. Mostly Mexicans, Chicanos, Mexican Americans
   3. About equally Raza (Mexicans, Chicanos, or Mexican Americans) and Anglos or other ethnic groups
   4. Mostly Anglos, Blacks, or other ethnic groups
   5. Almost exclusively Anglos, Blacks, or other ethnic groups

8. Whom do you now associate with in the outside community?
   1. Almost exclusively Mexicans, Chicanos, Mexican Americans (La Raza)
   2. Mostly Mexicans, Chicanos, Mexican Americans
   3. About equally Raza (Mexicans, Chicanos, or Mexican Americans) and Anglos or other ethnic groups
   4. Mostly Anglos, Blacks, or other ethnic groups
   5. Almost exclusively Anglos, Blacks, or other ethnic groups

9. What is your music preference?
   1. Only Spanish
   2. Mostly Spanish
   3. Equally Spanish and English
   4. Mostly English
   5. English only

10. What is your TV viewing preference?
    1. Only programs in Spanish
    2. Mostly programs in Spanish
    3. Equally Spanish and English programs
    4. Mostly programs in English
    5. Only programs in English

11. What is your movie preference?
    1. Spanish-language movies only
    2. Spanish-language movies mostly
    3. Equally English/Spanish
    4. English-language movies mostly
    5. English-language movies only

12. a. Where were you born
    1. Mexico 2. US 3. Other

    b. Where was your father born?
    1. Mexico 2. US 3. Other

    c. Where was your mother born?
    1. Mexico 2. US 3. Other

    d. Where was your father's mother born?

1. Mexico 2. US 3. Other

e. Where was your father's father born?
1. Mexico 2. US 3. Other

f. Where was your mother's mother born?
1. Mexico 2. US 3. Other

g. Where was your mother's father born?
1. Mexico 2. US 3. Other

13. Where were you raised?
1. In Mexico only
2. Mostly in Mexico, some in U.S.
3. Equally in U.S. and Mexico
4. Mostly in U.S., some in Mexico
5. In U.S. only

14. What contact have you had with Mexico?
1. Raised for one year or more in Mexico
2. Lived for less than 1 year in Mexico
3. Occasional visits to Mexico
4. Occasional communications (letters, phone calls, etc.) with people in Mexico
5. No exposure or communications with people in Mexico

15. What is your food preference?
1. Exclusively Mexican food
2. Mostly Mexican food, some American
3. About equally Mexican and American
4. Mostly American food
5. Exclusively American food

16. In what language do you think?
1. Only in Spanish
2. Mostly in Spanish
3. Equally in English and Spanish
4. Mostly in English
5. Only in English

17. Can you read Spanish?
1. Yes 2. No

Can you read English?
1. Yes 2. No

What do you read better?
1. I read only Spanish
2. I read Spanish better than English
3. I read both Spanish and English equally well
4. I read English better than Spanish
5. I read only English

18. Can you write in English?
1. Yes 2. No

Can you write in Spanish?
1. Yes 2. No

Which do you write better?
1. I write only in Spanish
2. I write in Spanish better than in English
3. I write in both Spanish and English equally well
4. I write in English better than in Spanish
5. I write only in English

19. If you consider yourself a Mexican, Chicano, Mexican American, member of La Raza, or however you identify this group, how much pride do you have in this group?
1. Extremely proud
2. Moderately proud
3. Little pride
4. No pride but does not feel negative toward group
5. No pride and feels negative toward La Raza

20. How would you rate yourself?
1. Very Mexican
2. Mostly Mexican
3. Bicultural
4. Mostly Anglicized
5. Very Anglicized

SHORT ACCULTURATION SCALE FOR HISPANICS

Marin, G., Sabogal, F., VanOss Marin, B., Otero-Sabogl, R., & Perez-Stable, E. (1987). Development of a Short Acculturation Scale for Hispanics. *Hispanic Journal of Behavioral Sciences*, *9*, 183-205.

What theory (if any) does the scale test? What is the purpose?

The SASH quantifies cultural adaptation among Hispanics, maintaining adequate levels of validity and reliability while avoiding the problems of previous scales.

Examine the Face Validity of Subscales and Individual Items:

A total of 12 items comprise the SASH. A "Language Use" subscale consists of 5 items related to language use as an adult and as a child, language used when interacting with friends or at work, and language currently spoken and thought in. Three items make up the "Media" subscale and measure preferences for electronic media. The "Ethnic Social Relations" subscale contains 4 items, which ask about the ethnicity of friends, children's friends, guests at parties, and visitors.

What Statistical Procedures has the Scale been Subjected to? What are the psychometric properties?

Marin, Sabogal, VanOss-Marin, Otero-Sabogal, & Perez-Stable conducted two exploratory principal components factor analyses with varimax rotation: one for the Hispanic sample and one for the non-Hispanic sample.

Three factors with eigenvalues greater than 1.0 accounted for 67.7% of the scale's total variance in the Hispanic sample factor analysis. Factor 1 accounted for 54.5% of the variance. It included items related to language use and ethnic loyalty. Seven items measured language use as an adult and as a child, language used when interacting with friends or at work, the ethnicity of lovers, and the ethnicity of neighbors when growing up. Factor 2 explained 7% of the variance and contained 3 items which measured use of and preference for electronic and printed media. The third factor measured ethnic social relations (i.e., ethnicity of friends for self and for one's children), accounting for 6.1% of the variance.

For the non-Hispanic sample factor analysis, the authors also identified 3 factors with eigenvalues greater than 1.0 which accounted for 64.4% of the total variance in the scale. Factor 1 accounted for 40% of the variance and included items related to language use similar to those reported for the Hispanic sample. Factor 2 accounted for 14.1% of the variance. Six items measured ethnic social relations, inquiring about preferred ethnicity of friends, neighbors, and lovers. Factor 3 included 3 items associated with preferences in electronic media. It accounted for 10.3% of the variance.

The authors synthesized these two analyses. Using a cutoff score of .60 and deleting items which loaded heavily on more than one factor, they identified 12 items—consisting of three subscales—that make up the final version of the SASH. They computed reliability coefficients for each of the three subscales: .90 for the 5 items in the "Language" subscale, .86 for the 3 items in the "Media" subscale, and .78 for the 4 items in the "Ethnic Social Relations" subscale.

In addition to reporting the psychometric properties of the scale, the authors correlated subjects' total scores and subscale

scores with their generation, length of residence in the United States, age at arrival, and self-identified level of acculturation. It is unclear whether the authors protected against alpha slippage when they conducted this large number of correlational analyses; however, the high correlations may support the scale's validity.

Short Acculturation Scale for Hispanics

ENGLISH

1	2	3	4	5
Only Spanish	Spanish better than English	Both Equally	English better than Spanish	Only English

1. In general, what language(s) do you read and speak?
2. What was the language(s) you used as a child?
3. What language(s) do you usually speak at home?
4. In which language(s) do you usually think?
5. What language(s) do you usually speak with your friends?
6. In what language(s) are the T.V. programs you usually watch?
7. In what language(s) are the radio programs you usually listen to?
8. In general, in what language(s) are the movies, T.V. and radio programs you *prefer* to watch and listen to?
9. You close friends are:

1	2	3	4	5
All Latinos/ Hispanics	More Latinos than Americans	About Half & Half	More Americans than Latinos	All Americans

10. You prefer going to social gatherings/parties at which the people are:
11. The persons you visit or who visit you are:
12. If you could choose your children's friends, you would want them to be:

SPANISH

1	2	3	4	5
Solo Espanol	Espanol major que Ingles	Ambos por igual	Ingles mejor que Espanol	Solo Ingles

1. Por lo general, que idioma(s) lee y habla usted?
2. Cual fue el idioma(s) que hablo cuando era nino(a)?
3. Por lo general, en que idioma(s) hable en su casa?
4. Por lo general, en que idioma(s) peinsa?
5. Por lo general en que idioma(s) habla con sus amigos(as)?
6. Por lo general, en que idioma(s) son los programas de television que usted ve?
7. POR LO GENERAL, EN QUE IDIOMA(S) SON LOS PROGRAMAS DE RADIO QUE USTED ESCUCHA?
8. Por lo general, en que idioma(s) *prefiere* oir y ver peliculas, y programas de radio y television?
9. Sus amigos y amigas mas cercanos son:

1	2	3	4	5
Solo Latinos	Mas Latinos que Americanos	Casi mitad y mitad	Mas Americanos que Latinos	Solo Americanos

10. Usted prefiere ir a reuiniones sociales/fiestas en las cuales las personas son:
11. Las personas que usted visita o que le visitan son:
12. SI USTED PUDIERA ESCOGER LOS AMIGOS(AS) DE SUS HIJOS(AS), QUISIERA QUE ELLOS(AS) FUERAN:

SUINN-LEW ASIAN SELF-IDENTITY ACCULTURATION SCALE (SL-ASIA)

Suinn, R. M., Richard-Figueroa, K., Lew, S., & Vigil, P. (1987). The Suinn-Lew Asian Self-Identity Acculturation Scale: An initial report. *Educational & Psychological Measurement, 47*(2), 401-407.

What theory (if any) does the scale test? What is the purpose?

Researchers developed this instrument to measure the process of giving up traditional cultural values and behaviors and replacing them with the dominant social structure's values and behaviors.

Examine the Face Validity of Subscales and Individual Items:

The SL-ASIA consists of 21 items in a multiple choice questionnaire format. The scale contains topics related to language, identity, friendships, behaviors, generational/ geographic background, and attitudes.

What Statistical Procedures has the Scale been Subjected to? What are the psychometric properties?

Two major weaknesses appear in the initial study assessing the validity of this instrument (1) a small sample size and (2) the use of scale items as criterion items. To correct these weaknesses Suinn, Ahuna, & Khoo (1992) conducted an investigation which used a larger sample and criterion from an independent source.

First, the authors calculated an internal-consistency coefficient alpha of .91 for the scale. Next, they assessed threats to concurrent validity by correlating scores on the SL-ASISA with demographic information theoretically hypothesized to reflect Asian-American identity. Correlations between scores on the SL-ASIA and demographic variables revealed that the scale correlated with (1) total years attending school in the U.S. (.61), (2) age upon attending school in the U.S. (-.60), (3) years living in the U.S. (.56), (4) age upon arriving in the U.S. (-.49), (5) years lived in a non-Asian neighborhood (.41), and (6) self-rating of acculturation (.62). Additionally, authors compared mean SL-ASIA total scores for individuals who reported English as their first language (3.16) and for those who reported an Asian language as their first language (2.17). The group that reported English as their first language had a higher mean acculturation score, indicating greater acculturation.

Authors then examined the scale's factor structure. They identified five interpretable factors with eigenvalues greater than one: (1) reading and writing ability and preference and entertainment preferences (accounting for 41.5 percent of the instrument's variance), (2) ethnic friendships (accounting for 10.7 percent of the instrument's variance), (3) affinity for ethnic identity and pride (accounting for 6.6 percent of the instrument's variance), (4) generational identity (accounting for 5.9 percent of the variance) and (5) food preferences (accounting for 5 percent of the variance). The authors compared this factor structure to the factor structure reported in studies of the ARSMA. They found that three factors (1, 2, and 4) appeared identical to those of the ARSMA. Other factors (3 and 5) appeared in the SL-ASIA, but not in the ARSMA. Finally, one factor (language familiarity) appeared separately in the ARSMA, but not in the SL-ASIA.

In 1995, Atkinson, Lowe, & Matthews reported an investigation in which they hypothesized that acculturation interacts with the type of presenting problem—personal or academic—and the individual's sex to produce differential counseling-seeking

behaviors between Asian Americans and Caucasians. They measured acculturation using the SL-ASIA, scoring items according to a 5-point Likert-type scale.

The authors did not report their statistical analyses. From their discussion, it seems that they scored the scale as if it represented a unidimensional construct of acculturation. They did not make use of the five-factor structure described by Suinn, Ahuna, & Khoo (1992). In fact, instead of using various components (i.e., language preferences—4 items, cultural identity—4 items, friendship choice—4 items, behaviors—5 items, generation/geographic history—3 items, and attitudes—1 item) they most likely calculated a single scale score to predict counseling-seeking behavior. With these null findings, Atkinson, Lowe, and Matthews remind us that we must thoroughly consider the structure and meaning of the measures we choose. Lack of an in-depth analysis of the SL-ASIA most likely lead to the inability to predict willingness to seek counseling.

SUINN-LEW ASIAN SELF IDENTITY ACCULTURATION SCALE

(SL-ASIA)

INSTRUCTIONS: The questions which follow are for the purpose of collecting information about your historical background as well as more recent behaviors which may be related to your cultural identity. Choose the one answer which best describes you.

1. What language can you speak?
   1. Asian only (for example, Chinese, Japanese, Korean, Vietnamese, etc.)
   2. Mostly Asian, some English
   3. Asian and English about equally well (bilingual)
   4. Mostly English, some Asian
   5. Only English

2. What language do you prefer?
   (same scale as #2)

3. How do you identify yourself?
   1. Oriental
   2. Asian
   3. Asian-American
   4. Chinese-American, Japanese-American, Korean-American, etc
   5. American

4. Which identification does (did) your mother use?
   (same scale as #3)

5. Which identification does (did) your father use?
   (same scale as #3)

6. What was the ethnic origin of the friends and peers you had, as a child up to age six?
   1. Almost exclusively Asians, Asian-Americans, Orientals
   2. Mostly Asians, Asian-Americans, Orientals
   3. About equally Asian groups and Anglo groups
   4. Mostly Anglos, Blacks, Hispanics, or other non-Asian ethnic groups
   5. Almost exclusively Anglos, Blacks, Hispanics, or other non-Asian ethnic groups

7. What was the ethnic origin of the friends and peers you had as a child from 6 to 18?
(same scale as #6)

8. Whom do you now associate with in the community?
(same scale as #6)

9. If you could pick, whom would you prefer to associate with in the community?
(same scale as #6)

10. What is your music preference?
1. Only Asian music (e.g., Chinese, Japanese, Korean, Vietnamese, etc)
2. Mostly Asian
3. Equally Asian and English
4. Mostly English
5. English only

11. What is your movie preference?
1. Asian-language movies only
2. Asian-language movies mostly
3. Equally Asian/English
4. English-language movies mostly
5. English-language movies only

12. Where were you born?
____U.S. ____Asia ____Other - Where_____

Where was your father born?
____U.S. ____Asia ____Other - Where_____ Don't Know

Where was your mother born?

Where was your father's father born?

Where was your father's mother born?

Where was your mother's father born?

Where was your mother's mother born?

On the basis of the above answers, circle the generation that best applies to you:

1 1st Generation = I was born in Asia or other

2 2nd Generation = I was born in U.S., either parent was born in Asia or other

3 3rd Generation = I was born in U.S., both parents were born in U.S., and all grandparents born in Asia or other

4 4th Generation = I was born U.S., both parents born in the U.S., and at least one grandparent born in Asia or other, and one grandparent born in U.S.

5 5th Generation = I was born in the U.S., both parents and all grandparents also born in the U.S.

6 Don't know what generation best fits since I lack some information

13. Where were you raised?
1. In Asia only
2. Mostly in Asia, some in U. S.
3. Equally in Asia and U.S.
4. Mostly in U. S., some in Asia

14. What contact have you had with Asia?

1. Raised one year or more in Asia
2. Lived for less than one year in Asia
3. Occasional visits to Asia
4. Occasional communications (letters, phone calls, etc.) with people in Asia
5. No exposure or communications with people in Asia

15. What is your food preference at home?
1. Exclusively Asian food
2. Mostly Asian food, some American
3. About equally Asian and American
4. Mostly American food
5. Exclusively American food

16. What is your food preference at restaurant?
1. Exclusively Asian food
2. Mostly Asian food, some American
3. About equally Asian and American
4. Mostly American food
5. Exclusively American food

17. Do you
   1. read only an Asian language
   2. read an Asian language better than English
   3. read both Asian and English equally well
   4. read English better than an Asian language
   5. read only English

18. Do you
   1. write only an Asian language
   2. write an Asian language better than English
   3. write both Asian and English equally well
   4. write English better than an Asian language
   5. write only English

19. If you consider yourself a member of the Asian group (Oriental, Asian, Asian-American, Chinese-American, etc., whatever term you prefer), how much pride do you have in this group?
   1. Extremely proud
   2. Moderately proud
   3. Little pride
   4. No pride but do not feel negative toward group
   5. No pride but do feel negative toward group

20. How would you rate yourself?
   1. Very Asian
   2. Mostly Asian
   3. Bicultural
   4. Mostly Westernized
   5. Very Westernized

21. Do you participate in Asian occasions, holidays, traditions, etc.?
   1. Nearly All
   2. Most of them
   3. Some of them
   4. A few of them
   5. Not at all

22. Rate yourself on how much you believe in Asian values (e.g., about marriage, families, education, work):

1 2 3 4 5
(do not believe) (strongly believe in Asian values)

23. Rate yourself on how much you believe in American (Western) values:

24. Rate yourself on how well you fit when with other Asians of the same ethnicity:

1 2 3 4 5
(do not fit) (fit very well)

25. Rate yourself on how well you fit when with other Americans who are non-Asian (Westerners):

26. There are many different ways in which people think of themselves. Which ONE of the following most closely describes how you view yourself?

   1. I consider myself basically an Asian person (e.g. Chinese, Japanese, Korean, Vietnamese, etc.). Even though I live and work in America, I still view myself as an Asian person.

   2. I consider myself basically as an American. Even though I have an Asian background and characteristics, I still view myself as an American.

   3. I consider myself an Asian-American, although deep down I always know I am an Asian.

   4. I consider myself as an Asian-American, although deep down,, I view myself as an American first.

   5. I consider myself as an Asian-American. I have both Asian and American characteristics, and I view myself as a blend of both.

RELEVANT INFORMATION, INTERPRETATION AND AUTHOR'S NOTES:

Relevant information:

After some further thought about acculturation and its measurement, I am suggesting that you add questions 22-26 to the SL-ASIA scale. These questions can serve to further classify your research participants in ways that utilize current theorizing that acculturation is not linear/unidimentional, but multidimensional and orthogonal.

Analysis:

1. Score the first 21 items as usually scored, for convenience continue to call this the SL-ASIA score; as stated in the original studies, you can use these scores in correlational analyses since they fall on a continuum. Or simply take the high and low scores as cutoffs to classify into categories (e.g. "1" and "2" scores are classified as Asian-identified, "4" and "5" scores are classified as Western); this method does not represent a continuum but categories, and some subjects will drop out of your analysis as you use the extreme scores.

2. Examine the answers to 22 and 23 together:

a. if 22 has 4 or 5 (high Asian values) and 23 has either 1, 2, or 3 (low Western values), then classify this person as Asian-identified;

b. if 23 has 4 or 5 (high Western) and 22 has either 1, 2, or 3 (low Asian), then classify this person as Western-identified;

c. of 22 has 4 or 5 (high Asian) and 23 has 4 or 5 (high Western), then classify this person as bicultural

d. if the subject has checked 1 or 2 for both 22 and 23 (low Asian and low Western), this person is denying any identification and may be alienated from both cultures.

Using these questions, you can re-examine your data with these items being used to re-classify or re-categorize your sample. For convenience call the scoring of the questions 22 and 23 the "SL-ASIA values score." Because the categorizing method uses a different set of variable, then classification using the original 21 item SL-ASIA scores, you might obtain different results.

3. Examine the answers to 24 and 25 together:

a. if 24 has 4 or 5 (high Asian) and 25 has either 1, 2, or 3 (low Western), then classify this person as Asian-identified

b. if 25 has 4 or 5 (high Western) and 24 has either 1, 2, or 3 (low Asian), then classify this person as Western-identified

c. if 24 has 4 or 5 (high Asian) and 25 has 4 or 5 (high Western), then classify this person as bicultural

d. if the subject checked 1 or 2 for both 24 and 25 (low Asian and low Western), this person is denying any identification and may be alienated from both cultures.

As with use of times 22 and 23, this procedure involves categorizing and is not on a continuum. For convenience, call the scoring of items 24 and 25 the "SL-ASIA behavioral competencies score." The assumption is that "fitting" reflects the presence of behaviors that enables such a fit.

4. Item 26 is straightforward, wince each possible answer is a category in itself:
   a. answer 1 defines the person as Asian-identified
   b. answer 2 is Western self-identified
   c. answers 3, 4, and 5 are all bicultural-identified, but with sub-categories
      1. answer 3 is Bicultural, Asian self-identity
      2. answer 4 is Bicultural, Western self-identity
      3. answer 5 is Bicultural, bicultural self-identity

Item 26 could therefore be scored on a continuum: Asian identified, Bicultural Asian, Bicultural/bicultural identity, Bicultural Western, and Western identified. In using item 26, for convenience call the scoring "SL-ASIA self-identity score."

5. Item 26 might also be scored by another procedure, based on a very small pilot study we just completed:

a. answers using either 1 or 3 would classify the person as "Asian identified"
b. answers using either 2 or 4 would classify the person as "Western identified"
c. answers using 5 would classify the person as "bicultural"

CULTURAL ADAPTATION PAIN SCALE

Sandhu, D. S., Portes, P. R., & McPhee, S. A. (1996). Assessing cultural adaptation: Psychometric properties of the cultural adaptation pain scale. *Journal of Multicultural Counseling and Development, 24*, 15-25

What theory (if any) does the scale test? What is the purpose?

This scale quantifies the individual's cultural adaptation and psychological pain associated with integrating new values.

Examine the Face Validity of Subscales and Individual Items:

The *cultural identity scales* contain items that assess (1) pain and distress, (2) learned helplessness, (3) bigoted behavior and (4) Positive Adaptation.

What Statistical Procedures has the Scale been Subjected to? What are the psychometric properties?

CAPS produced an overall Cronbach's alpha of .85. Principal component factor analysis yielded a four-factor solution (R2=.35) corresponding to above constructs.

THE CULTURAL ADAPTATION PAIN SCALE (CAPS)

This instrument is designed to assess the degree of adjustment of individuals from various backgrounds as they come in contact with new or different social contexts. The CAPS aims to explore the extent of mental distress and emotional sensitivity experienced in everyday life.

Directions: Often times social interactions, confrontations, and even collaborations with diverse people can become very painful psychologically. Adapting to new situations is often uncomfortable. This scale is designed to assess the degree of pain and emotional distress you may be experiencing at the present time. There are no tight or wrong answers. However, for the results to be meaningful, you must answer these statements as honestly as possible. Circle "Strongly Agree" if the item holds true for you most of the time and so on. Please respond to all items.

1. Marital Status:
   A. Single B. Married C. Divorced/Separated D. Widow(er)

2. Ethnicity: A. White (not of Spanish descent)
   B. African American
   C. Native American
   D. Latin American
   E. Asian American/Pacific Islander
   F. Arab America

G. Other (write in the cultural background that best describes you) (e.g. Cajun) _____

3. Number of years you have lived in the U. S.: _____

4. Family Income: A. Below $12,000 a year
   B. $12,000 to $20,000
   C. $20,001 to $35,000 If you are a student, go by
   D. $35,001 to $50,000 your parents' income.
   E. $50,001 to $100,000
   F. Above $100,000

5. Languages you are fluent in: _____

6. Gender: Male _____ Female _____

7. Nationality: A. U.S. Citizen
   B. U.S. Permanent Resident
   C. Other (list which _____)

8. Your age: _____

9. Years of education completed by you: _____
   Years if education completed by most educated parent: _____

In general, (I feel that):

STRONGLY AGREE	AGREE	NOT SURE	DISAGREE	STRONGLY DISAGREE

1. Many opportunities are denied to me.
2. My choices for success in life are limited.
3. Some ethnic groups are inherently inferior to others.
4. I am looked down upon by some people.
5. I am often not taken seriously.
6. 6. I get impatient when I can't understand a different accent.
7. I am often considered less capable than
8. Others try to make me feel inferior.
9. 9. Meaningful communication is a problem with most folks.
10. 10. My achievements are not considered very important.
11. 11. This society is becoming a mixture of too many different ethnic groups.
12. I don't feel others are biased toward me.
13. I have been denied opportunities I deserve.
14. I suffer from prejudice and unequal treatment.
15. I am required to do more than others to prove my abilities.
16. I feel I have a clear identity in this culture.
17. I lose enthusiasm in trying to succeed when I know that I have to face extra obstacles.

18. I don't have as many choices as others around me.
19. 19. I become angry about the stereotypes and negative reactions people have about me.
20. Affirmative action laws are necessary to
21. empower certain ethnic groups.
22. 21. Trying hard to get ahead doesn't work for people like me.
22. I feel adequate to function in this society.
23. I don't have much control over my life generally.
24. I feel I don't have as much support as others.
25. I feel a sense of community with others around me.
26. I feel I belong in the present culture.
27. Our government should not allow migration from some ethnic groups to our country.
28. I'm treated as a second rate citizen some of the time.
29. I feel sad living in my present surroundings.
30. I feel I can get ahead in life as well as anyone else.
31. feel uncomfortable with other people's cultural values in this society.
32. Some ethnic groups are free loaders in our society.
33. If I try to work hard I'll have a good future.
34. It hurts me to think that I'm treated differently because of my background or gender.
35. Others act as if they are better than I am.
36. I feel sorry for children who have to adapt to a different culture.
37. In order to maintain one's cultural identity, one should not try to assimilate with other cultural groups.
38. I often sense a feeling of alienation.
39. Some groups have hostility towards me.
40. I feel uncomfortable in participating in social activities.
41. People often exchange greetings with me.
42. I feel it is fair to blame some ethnic groups for their plight.
43. I feel irritated when people are insensitive to the cultural values of others.
44. I feel amused when people make fun of cultural stereotypes.
45. I'm not bothered when people use ethnic/racial slurs.
46. I am ostracized (shunned) by some people.
47. When I have to communicate with authority figures, I feel inadequate.
48. Despite all my efforts, I will not be able to succeed in this society as well as I could.
49. I feel a sense of helplessness and hopelessness.
50. It makes me work harder when others have an unfair advantage.
51. It is very important to have high hopes in this society.
52. I have deep roots in this country.
53. 53. Gender issues are more important to me than cultural background.
54. I'm bothered when persons from minority groups take unfair advantage (to advance themselves).
55. Cultural identity is most important to my sense of self.
56. Only one language should be used to teach children in school.

INVENTORY OF STUDENT ADJUSTMENT STRAIN (ISAS)

Crano, S. L., & Crano, W. D. (1993). A measure of adjustment strain in international students. *Journal of Cross-Cultural Psychology, 24*(3).

What theory (if any) does the scale test? What is the purpose?

Researchers developed this scale as an objective measure that reliably and validly measures the stresses and adjustment strains faced by international students as they attempt to adapt to a new environment.

Examine the Face Validity of Subscales and Individual Items:

The ISAS consists of six psychologically meaningful subscales: Education, Host, English, Problem, Personal, and Social. The Education subscale includes 7 items about schooling (i.e., concerns with grades, ability to concentrate on studies). The Host subscale contains 5 items related to students' relationships with their host family (i.e., relationships with host family siblings, feeling like a member of the family). The English subscale consists of 6 items about difficulties experienced with the English language (i.e., difficulties in speaking the language, inability to understand English slang). The Problem subscale involves 5 items related to global difficulties (i.e., dietary problems, differences in food, concerns about health). The 9 items in the Personal subscale relate to personal experiences that hinder social adjustment (i.e., lack of counseling, inability to maintain beneficial relationships, homesickness). Finally, 6 items in the Social subscale assess social practices that prove troublesome (i.e., dating practices, relationships between men and women, morals).

Individuals endorse each item with a "yes" or no "response." If they respond with a "yes" answer, they then rate the extent to which the particular problem assessed by the item is personally troublesome. Ratings are on a 5-point scale with endpoints ranging from 1 *hardly at all* to 5 *very much*.

What Statistical Procedures has the Scale been Subjected to? What are the psychometric properties?

Crano and Crano (1993) subjected the original 60-item scale to a principal components factor analysis with varimax rotation. They extracted 6 factors with eigenvalues greater than 1.0, retaining 38 items whose factor loadings were greater than or equal to .40. They computed alpha coefficients for each of the 6 factors: Education subscale (.69), Host subscale (.80), English subscale (.86), Problem subscale (.69), Personal subscale (.80), and Social subscale (.73).

To assess the construct validity of the survey, the authors computed correlations of the instrument with measures of self-concept, ratings of students' experience in the United States, students' desire to spend another year in the United States, and ratings of adjustment provided by host families. Results suggest the overall validity of the ISAS. Adjustment strain and self-concept negatively relate: the greater the strain the less positive the ratings for self-concept. ISAS scores also correlated with a general information questionnaire rating their experience in the United States ($r=.25$, $n=148$, $p<.001$). ISAS scores also correlated with a seven-item host family measure (HFM) at both initial ($r=-.17$, $p<.01$) and at retest administrations ($r=-.26$, $p<.001$). The

relationship seems to validate the assumption that the foster family's overall impression of their student influences adjustment strain.

INVENTORY OF STUDENT ADJUSTMENT STRAIN (ISAS)

The Original 60 Items of the Inventory of Student Adjustment Strain (ISAS): Note that the item format for all items was identical to that of the first item. To preserve space, the response options are not presented for any but the first item.

1. I am troubled because I hear unfavorable things about my home country:

YES NO

If yes, how troubled are you?
Very Much Much Some A little Bit Hardly at all

2. I am troubled by the concept of being a "foreigner"
3. The idea that I might become too much like a North American troubles me:
4. Feeling that I never should have participated in an AFS experience troubles me:
5. The lack of availability of personal-counseling troubles me:
6. My inability to maintain good relationships with people in the U.S. troubles me:
7. The difference between the food of the U.S. and the food of my country troubles me:
8. Differences between housing and living conditions in the U.S. and in my home country troubles me:
9. Differences between my physical appearance and the appearance of people in the U.S. troubles me:
10. Differences between religious practices in the U.S. and religious practices in the U.S. troubles me:
11. Concern about my own religious practices in the U.S. troubles me:
12. My difficulties in speaking English troubles me:
13. The treatment that I receive at social functions troubles me:
14. The relationship between men and women troubles me:
15. Being unable to concentrate on my studies troubles me:
16. The difference between leisure time activities of students in the U.S. and students in my home country troubles me:
17. Insufficient advice from my academic advisor troubles me:
18. Being lonely troubles me:
19. Difficulty in making new friends in the U.S. troubles me:
20. Nervousness troubles me:
21. I am troubled when I attend classes and lectures in English because I don't understand English very well:
22. Feeling intellectually superior to high school students in the U.S. troubles me:
23. I am troubled when I read textbooks and novels written in English because I don't understand them well:
24. Feeling uninterested in the high school that I am attending troubles me:
25. The dating practices in the U.S. troubles me:
26. I am troubled by the changes that are occurring in my home country that I see on television or read in the newspaper:
27. The desire not to return to my home country troubles me:
28. My lack of knowledge about the U.S. troubles me:
29. The emphasis on time and promptness in the U.S. troubles me:
30. My concerns with grades in school trouble me:
31. Sexual customs in the U.S. troubles me:
32. Feelings of homesickness troubles me:
33. Feeling inferior to people in the U.S. troubles me:
34. My relationship with my host parents troubles me:
35. My relationship with my host brother and/or sisters troubles me:
36. Not feeling like a member of my host family troubles me:
37. The difficulties I have in getting along with the friends of my host brothers and sisters troubles me:
38. Feeling too shy to come out of my room to join my host family troubles me:
39. The way my host family treats me troubles me:

40. Dietary problems trouble me:

41. Rapidly gaining or losing weight since I arrived in the U.S. troubles me:

42. Not being able to understand slang phrases in the U.S. troubles me:

43. My limited English vocabulary troubles me:

44. Problems I have shopping in the U.S. troubles me:

45. The fact that education in the U.S. is not what I expected it to be troubles me:

46. Differences between the education system of the U.S. and the education system of my home country troubles me:

47. The attitudes of some people in the U.S. toward some foreigners troubles me:

48. Relationships between teachers and students in the U.S. troubles me:

49. Differences between personal habits and cleanliness in the U.S. and in my home country troubles me:

50. Not feeling at ease among groups of people troubles me:

51. Frequently crying or feeling depressed troubles me:

52. The difference between whether conditions in the U.S. and my home country troubles me:

53. Feeling that I am under stress and tension troubles me:

54. Concerned that my health is deteriorating troubles me:

55. Confusion I have about the morals in the U.S. troubles me:

56. Knowing that I need help with English troubles me:

57. Concerned about needing assistance from the AFF troubles me:

58. Feeling that I would prefer to go home immediately troubles me:

59. Concern about readjusting to my natural family in my home country troubles me:

60. Feeling dependent on other people troubles me:

Scales of Interest, To Be Included at a Later Date

Group Identification

African self-consciousness Scale

Baldwin, J. A., & Bell, Y. (1985). The African self-consciousness scale: An Africentric personality questionnaire. *The Western Journal of Black Studies, 9*, 61-68.

What theory (if any) does the scale test? What is the purpose?

This measure was developed to assess the racial (ethnic) identification of Black people, or African Americans.

Examine the Face Validity of Subscales and Individual Items:

Questionnaire contains 42 items covering the following concepts: (1) awareness/ recognition of one's African identity and heritage, (2) general ideological and priority of activities based on Black survival, liberation and proactive/ affirmative development, (3) preference for Africentric values, customs and institutions, and (4) attitude of resistance toward "anti-Black" forces, and threats to Black survival.

What Statistical Procedures has the Scale been Subjected to? What are the psychometric properties?

Internal validity using Pearson product moment coefficient was reported as r=.70. Test- retest reliability was reported as .90.

ETHNIC SELF-IDENTIFICATION

Phinney, J. S. (1990). Ethnic identity in adolescent and adults: Review of research. *Psychological Bulletin, 108*(3), 499-514.

What theory (if any) does the scale test? What is the purpose?

The scale attempts to capture self-definition with a particular group.

Examine the Face Validity of Subscales and Individual Items:

The scale measured items in the following categories: (1) sense of belonging, (2) positive and negative attitudes toward one's ethnic group, (3) social participation and cultural practices, (4) language, (5) friendship, (6) religious affiliation and practice, (7) structured ethnic social groups, (8) political ideology and activity, (9) area of residence, and (10) miscellaneous ethnic/cultural activities and attitudes.

What Statistical Procedures has the Scale been Subjected to? What are the psychometric properties?

Of the studies Phinney (1990) researched, less than a fifth provided reliability measures. Reliability coefficients offered, generally Cronbach's alpha, ranged from .35 to .90, though most were low (Phinney, 1990). None of the studies provided test-retest measures.

Only negatively worded items loaded on the "socio-political", while positive items loaded on "psychological". The questions on these two scales are similar to the positive and negative aspects of self-esteem, and are weakly correlated (like positive and negative self-esteem) r=.26. The "psychological" subscale is correlated to the "physical" subscale (r=.59) and the "cultural" subscale (r=.58).

RACIAL IDENTITY ATTITUDE SCALE (RIAS)

Helms, J. E. & Carter, R. T. (1990). Development of the White racial identity inventory. In J. E Helms (Ed.) *Black and White Racial Identity: Theory, Research, and Practice*, pp. 67-80. CT: Greenwood Press.

What theory (if any) does the scale test? What is the purpose?

This scale measures attitudes associated with Cross' (1971) four stages—Preencounter, Encounter, Immersion-Emersion, and Internalization—of the Negro-to-Black conversion experience. Progression through the four developmental stages serves as an explanation for within-group variability in racial identity.

Examine the Face Validity of Subscales and Individual Items:

This scale consists of 30 items. Individuals make responses on a 5-point Likert scale ranging from (1) *strongly disagree* to (5) *strongly agree*. Items in each subscale attempt to quantify attitudes related to each stage—8 pre-encounter, 6 encounter, 10 immersion-emersion, and 6 internalization.

What Statistical Procedures has the Scale been Subjected to? What are the psychometric properties?

Ponterotto & Wise (1987) reviewed studies of the RIAS and found reports of problematic alpha coefficients, suggesting lack of internal consistency within the four subscales. They also noticed discrepancies in RIAS subscale intercorrelations. As a result, they examined the construct validity of the RIAS.

First, they calculated alpha coefficients for each subscale: .63 for Pre-encounter, .37 for Encounter, .72 for Immersion-Emersion, and .37 for Internalization. In addition, the authors

computed subscale intercorrelations (-.01 for Pre-Encounter and Encounter, -.03 for Pre-encounter and Immersion-Emersion, .03 for Pre-encounter and Internalization, .49 for Encounter and Immersion-Emersion, -.15 for Encounter and Internalization, and .10 for Immersion-Emersion and Internalization). For the most part, the subscales seem to measure unique stages.

Next the authors used factor analytic methods in order to compare alternative factor solutions. Based on Cross' 4-stage theory, the authors expected the 4-factor solution to perform best. They tested this model first, but found many ambiguities, including a factor that contained items representing attitudes from several stages. After analyzing the 3-, 5-, 6-, and 7-factor models, it became clear that the best alternative model was the three-factor solution. They found interpretable factor structures for the immersion-emersion (factor 1), pre-encounter (factor 2), and internalization stages (factor 3); however, they did not find adequate statistical support for the encounter stage. This solution resulted in the deletion of the ambiguous factor present in the 4-factor solution. Potential users of this instrument must realize one major caveat: the solution accounted for less than 30% of the common variance; there remains a considerable amount of variance in the scale that is not accounted for by these three factors.

VALUE ORIENTATION

CHINESE VALUE SURVEY

Chinese Culture Connection (1987). Chinese values and the search for culture-free dimensions of culture. *Journal of Cross-Cultural Psychology*, *8*, 143-164.

What theory (if any) does the scale test? What is the purpose?

Investigators designed the scale to measure fundamental and basic values that reflect indigenous themes and concerns of Chinese culture.

Examine the Face Validity of Subscales and Individual Items:

Researchers may administer the survey in either Chinese or English (i.e., the authors have produced an English translation from the original Chinese version). The survey consists of 40 items that represent 40 values reported by a sample of Chinese social scientists as "fundamental and basic values for Chinese people". Respondents rate the importance of each of the concepts on a 9-point scale ranging from "of supreme importance (to me personally)" to "of no importance at all (to me personally)".

The authors identify four subscales within the survey: Integration, Confucian Work Dynamism, Human-heartedness, and Moral Discipline. The Integration subscale consists of statements related to integrative, socially stabilizing behaviors (e.g., tolerance of others and non-competitiveness). The Confucian Work Dynamism subscale consists of items representing Confucian work ethics (e.g., ordering relationships, persistence, and respect for tradition). The Human-heartedness subscale assesses the dynamics of social interactions (e.g., kindness, courtesy, and sense of

righteousness). Finally, the Moral Discipline subscale rates moral restraint (e.g., moderation and having few desires).

What Statistical Procedures has the Scale been Subjected to? What are the psychometric properties?

The authors conducted an ecological factor analysis on the culture means from 22 countries around the world. For each culture, the means for each item became the culture's score on that item. The authors transformed the data (i.e., they standardized the 40 value means within each culture separately) in order to visualize the content factors more clearly. They then conducted a principal axis factor analysis on the 40 standardized means from each culture, and using the varimax procedure, orthogonally rotated the factors. Using scree test criterion, the investigators identified four factors in the matrix that accounted for 21.3%, 15.4%, 11.5%, and 8.7% of the matrix variance.

Next, they computed an intercorrelation matrix of 40 values from the 40 items in the survey. They used this matrix as a similarity matrix in a nonmetric multidimensional scaling (MDS) analysis. They identified a 4 dimension solution among the items. These factors correlated with those derived in the factor analysis suggesting that one need not be concerned about the small number of cases (22) used in the factor analysis.

CULTURAL INFORMATION SCALE (CIS)

Saldana, D. H. (1994). Acculturative stress: Minority status and distress. *Hispanic Journal of Behavioral Sciences, 16*, 116-128.

What theory (if any) does the scale test? What is the purpose?

The CIS provides an assessment of demographic and psychological factors associated with transitions in ethnic identity for Hispanic students attending a predominantly Anglo university.

Examine the Face Validity of Subscales and Individual Items:

The 23-item scale consists of two subscales aggregated to measure acculturation. Questions in the *demographic index* assess generation level in the U.S., current language preference, fluency in Spanish, and ethnicity of childhood friends. The *psychological index* includes items which reveal individual-differences along psychological dimensions.

What Statistical Procedures has the Scale been Subjected to? What are the psychometric properties?

Saldaña (1994) conducted a study to assess the ways in which dimensions of acculturation predict psychological distress among Hispanic students in a primarily White college. She used the CIS to measure particular demographic and psychological dimensions of acculturation.

She subjected all items on the scale to factor analytic procedures. The analysis yielded a four-factor solution, accounting for 58.4 percent of the total variance in level of acculturation. Three factors consisted of items from the *psychological index* and accounted for 52.1 percent of the variance in level of acculturation. The first included 5 questions (alpha coefficient=.83) pertaining to *behavioral preferences* (i.e., books and magazines, television programs, music, dating partner, and close friends). The second factor contained 5 items (alpha coefficient=.78) measuring *cultural integration* (i.e., community/citywide celebrations, family observations, religious celebrations, civic or political activities, and

peer ethnic preference). The third factor contained 9 items (alpha coefficient=.81) related to *ethnic loyalty* (i.e., importance of identifying cultural heritage, importance of bilingualism, importance of cultural pride, and importance of participating in cultural activities). The fourth, and final factor, consisted of items from the *demographic index*. Four items (i.e., ethnic identity label, fluency in Spanish, generation level, and language preference) with an alpha coefficient of .36 accounted for 6.3 percent of the variance in level of acculturation.

In addition to the CIS, Saldaña also constructed a 33-item scale to study minority status stresses. Individuals rated each item according to a 6-point scale ranging from 5 *extremely stressful* to 1 *not stressful at all* and 0 *does not apply to me*. In an exploratory factor analysis, Saldaña computed an orthogonal varimax rotated factor matrix that revealed 5 scales accounting for 33 percent of the variance in total stress attributed to minority status.

The first scale, *academic concerns*, accounted for 46 percent of the shared variance (alpha coefficient=.93). The second scale, *ethnic-nonethnic group concerns*, accounted for 46 percent of the shared variance (alpha coefficient=.84). The third scale, *discrimination concerns*, accounted for 15 percent of the shared variance (alpha coefficient=.86). Saldaña did not report alpha coefficients for the fourth and fifth scales. The fourth scale, *within-ethnic group stresses*, accounted for 12 percent of the shared variance. The fifth scale, *individual preparation concerns*, accounted for 9 percent of the variance.

ETHNOCULTURAL BEHAVIORAL INDEX

Yamada, A.M., Marsella, A.J., & Yamada, S. (in press). The Ethnocultural Identity Behavioral Inventory. Asian-American and Pacific Island Journal of Public Health.

FAMILISM SCALE

Sabogal, F., Marin, G., Otero-Sabogal, R., VanOss-Marin, B., & Perez-Stable, E. (1987). Hispanic familism and acculturation: What changes and what doesn't?

What theory (if any) does the scale test? What is the purpose?

Investigators designed the scale to measure identification and attachment of individuals to their family networks. The scale measures attitudinal familism, behavioral acculturation, and sociodemographics.

Examine the Face Validity of Subscales and Individual Items:

The authors included familism items developed by Bardis (1959). Individuals rated 15 questions on a 5-point Likert scale ranging from 5 (*Very Much in Agreement*) to *1 (Very Much in Disagreement*). The questionnaire also included 5 items from the **Short Acculturation Scale for Hispanics** measuring language proficiency and preference in various settings. Finally, demographic questions inquired about an individual's gender, age, marital status, educational level, income, length of residence in the United States and generation.

What Statistical Procedures has the Scale been Subjected to? What are the psychometric properties?

The authors subjected the familism items to a principal components factor analysis using varimax rotation. They

identified 3 factors with eigenvalues greater than 1.0 that accounted for 48.4% of the variance among the items. The Familial Obligations factor included 6 items relating to an individual's "…perceived obligation to provide material and emotional support to members of the extended family" (p. 401). With a Cronbach's alpha of .76, it accounted for 27.7% of the total variance among the factors. Perceived Support from the Family included 3 items measuring "…perception of family members as reliable providers of help and support to solve problems" (p.401). This factor accounted for 10.9% of the variance, and the authors computed a Cronbach's alpha of .70. Finally, the 5 items in the Family as Referents factor examined how individuals perceived "relatives as behavioral and attitudinal referents" (p.404). It explained 9.8% of the variance with a Cronbach's alpha of .64.

Although a general theoretical framework inspired the overall development of this scale, the authors empirically derived specific dimensions of familism. Investigators using this scale in the future ought to subject it to more rigorous theoretical and statistical analyses to confirm the validity of its psychometric properties.

VALUE ORIENTATION SCALE

Szapocznik, J., Scopetta, M. A., Aranalde, M., & Kurtines, W. (1978). Theory and measurement of acculturation. *Journal of Psychology, 12*, 113-130.

What theory (if any) does the scale test? What is the purpose?

Investigators designed the scale to measure the way members of different cultures find solutions to or respond to five common problems.

Examine the Face Validity of Subscales and Individual Items:

The authors included items targeting five different orientations: 1) Human nature orientation: humans as innately good, evil or neutral, 2) Person-nature orientation: human subjugation, mastery or harmony with nature, 3) Activity orientation: individual judges him/herself as doing, being or being in becoming, 4) Time orientation: past, present, future, and 5)Relational orientation: dominant-submissive, collectivist or individualistic.

What Statistical Procedures has the Scale been subjected to? What are the psychometric properties?

Four factors emerged (activity orientation never became represented) using alpha solution and oblique rotation (N=325). Factors essentially are orthogonal (-.12 to .16 intercorrelation). The scale accounted for a total variance of 14.52%.

MULTIDIMENSIONAL SCALE OF CULTURAL DIFFERENCE

Szapocznik, J., Scopetta, M. A., Aranalde, M., & Kurtines, W. (1978). Theory and measurement of acculturation. *Journal of Psychology, 12*, 113-130.

What theory (if any) does the scale test? What is the purpose?

This scale was constructed to measure value orientations in order to predict group membership, i.e. Hispanic or Anglo.

Examine the Face Validity of Subscales and Individual Items:

Items in the scale targeted three sets of ideas: language familiarity and usage, nationality, and occupational status.

What Statistical Procedures has the Scale been Subjected to? What are the psychometric properties?

Items on scale regressed on a dichotomous criterion reflecting group membership: Hispanic or Anglo (N=924). Double cross-validation procedure yielded substantial multiple correlations ($.66 \leq R \leq .80$) with the criterion: 1. number of family members living in the home, 2. language spoken at home, 3. type of job held by head of household, 4. years of education of the head, 5. Citizenship of the head of the household, 6. Area where the head of the household grew up and 7. Scores on a semantic differential measuring Father-Male potency.

However, Gonzales and Roll (1985) found MCSD scores and Declared Background do not perfectly correlate, especially in younger grades, for example: 4/5th graders r=.36 (N=39), 8th graders r=.37 (N=38), 12th graders r=.52 (N=62) and college students r=.59 (N=58) (Gonzales & Roll, 1985). In addition, declared background had stronger association to three dependent measures (Group Embedded Figures Test, Vocabulary Section of Weschsler Adult Intelligence Scale and the Weschsler Intelligence Scale for Children) than MSCD scores.

MULTIDIMENSIONAL MEASURE OF CULTURAL IDENTITY FOR LATINO AND LATINA ADOLESCENTS

Feliz-Ortiz, M., Newcomb, M. D., & Myers, H. (1994). A multidimensional measure of cultural identity for Latino and Latina adolescents. *Hispanic Journal of Behavioral Sciences, 16*(2), 99-115.

What theory (if any) does the scale test? What is the purpose?

This scale quantifies the individual's sense of familiarity with both American and Latino (a) cultures.

Examine the Face Validity of Subscales and Individual Items:

The *cultural identity scales* contain items that assess (1) language use, (2) behavior and familiarity with aspects of American and Latino(a) culture, and (3) specific Latino(a) values and attitudes.

What Statistical Procedures has the Scale been Subjected to? What are the psychometric properties?

Felíx-Ortiz, Newcomb, & Myers (1994) conducted several exploratory factor analyses for each dimension of interest—language, behavior and familiarity, and values and attitudes—using maximum likelihood estimates. The authors did not assume orthogonality of the dimensions; therefore, they implemented oblique factor rotation. They retained only those items with eigenvalues greater than one, high interpretability, high item loadings, and unique (i.e., loading on only one factor) item loadings. 10 interpretable, reliable factors met these criteria.

The *Language subscales* consisted of three factors: Spanish proficiency (4 items with alpha coefficient=.88), Spanish language preference (4 items with alpha coefficient =.87), and English proficiency (3 items with alpha coefficient =.91). Four factors comprised the *Behavior and Familiarity subscales*: Familiarity with American culture (4 items with alpha coefficient =.69), Familiarity with Latino(a) culture (4 items with alpha coefficient =.77), Latino(a) activism (4 items with alpha coefficient =.79), and Preferred Latino(a) affiliation (3 items with alpha coefficient =.89). The *Value and Attitude subscales* contained three factors: Perceived discrimination (3 items with alpha coefficient =.72), Respeto (3 items with alpha coefficient =.77), and Feminism (3 items with alpha coefficient =.81).

The authors calculated an intercorrelation matrix among the 10 scales. They found 15 significant correlations among the

scales, yet only 4 had magnitudes exceeding .40. To determine criterion and discriminant validity, they correlated the factors with the Short Acculturation Scale (Marin, Sabogal, Marin, Otero-Sabogal, and Perez-Stable, 1987), generation status, and length of time in the United States. *Language subscales* significantly correlated with each criterion variable. The *Familiarity with Latino(a) subscale* significantly correlated with each criterion variable. *The Familiarity with American Culture subscale* positively correlated with items from the Short Acculturation Scale and with length of time in the United States and English proficiency. The *Latino(a) Activism subscale* and *Perceived discrimination subscale* negatively correlated with length of time in the United States. Finally, the *Respeto subscale* negatively correlated with items from the Short Acculturation Scale.

The authors created four cultural identity groups. They conducted a median split for each *Familiarity subscale* distribution to identify individuals with high-familiarity with a culture and low-familiarity with a culture. Individuals in the bicultural group had high-familiarity scores with both cultures. Those in the Latino(a) identified group scored high on familiarity with the Latino(a) culture but low with the American culture; whereas, those in the American identified group scored high on familiarity with American culture but low on familiarity with Latino(a) cultures. Finally, the low-level bicultural group had low-familiarity scores with both cultures. In pairwise, post hoc comparisons, the authors compared the four cultural identity groups on various dependent measures. Results indicated that the four cultural identity groups differed in language use and behavior, political activism, and socialization preferences. Groups did not differ on values.

CULTURAL ADAPTATION PAIN SCALE

Sandhu, D. S., Portes, P. R., & McPhee, S. A. (1996). Assessing cultural adaptation: Psychometric properties of the cultural adaptation pain scale. *Journal of Multicultural Counseling and Development, 24*, 15-25

What theory (if any) does the scale test? What is the purpose?

This scale quantifies the individual's cultural adaptation and psychological pain associated with integrating new values.

Examine the Face Validity of Subscales and Individual Items:

The *cultural identity scales* contain items that assess (1) pain and distress, (2) learned helplessness, (3) bigoted behavior and (4) Positive Adaptation.

What Statistical Procedures has the Scale been Subjected to? What are the psychometric properties?

CAPS produced an overall Cronbach's alpha of .85. Principal component factor analysis yielded a four-factor solution (R2=.35) corresponding to above constructs.

MINORITY STATUS

CULTURAL MISTRUST INVENTORY

(Terrell & Terrell, 1981)

What theory (if any) does the scale test? What is the purpose?

Researchers developed this scale to measure the degree of mistrust of Whites and White related institutions by individuals (assumed to be a result of exposure to discrimination).

Examine the Face Validity of Subscales and Individual Items:

CMI is scored on a 7-point Likert scale with 48 items. The items assess mistrust in (1) education and training, (2) law and politics, (3) work and business, and (4) interpersonal and social settings.

What Statistical Procedures has the Scale been Subjected to? What are the psychometric properties?

Internal validity using Pearson product moment coefficient, r=.70. Test- retest reliability was assessed with a posttest, given two-week later, was .86. Intercorrelations within the 4 CMI subscales are low (r=. 11 to .23), suggesting orthogonality. Convergent validity with Terrell and Millers (1980) Racial Discrimination Index; higher scores on discrimination significantly correlated to higher mistrust.

SCALE FOR THE EFFECTS OF ETHNICITY AND DISCRIMINATION (SEED)

Cardo, L. M. (1994). Development of an instrument measuring valence of ethnicity and perception of discrimination. *Journal of Multicultural Counseling & Development*, *22*, 49-59.

What theory (if any) does the scale test? What is the purpose?

Researchers developed this scale as to measure ethnicity and discrimination.

Examine the Face Validity of Subscales and Individual Items:

The scale contain items that assess (1) Valence of ethnicity for Self (VES), (2) Valence of ethnicity for Others (VEO), and (3) Perception of Discrimination (PD).

What Statistical Procedures has the Scale been Subjected to? What are the psychometric properties?

Construct validity was calculated by correlating scores from self-esteem measures and SEED scores. A significant positive relationship was indicated between self-esteem scores and VES, a negative relationship between self-esteem and PD, and no relationship between self-esteem scores and VEO scores.

MATERIAL STATUS

DEPRIVATION

Townsend, P. (1987). Deprivation. *Journal of Social Policy, 16*(2), 125-146.

What theory (if any) does the scale test? What is the purpose?

The questionnaire attempts to capture indicators of deprived conditions, experiences and behaviors.

Examine the Face Validity of Subscales and Individual Items:

The questionnaire consists of two broad subscales: Material Deprivation and Social Deprivation. Each subscale contains a list of deprivation headings. Each heading includes multiple indicators. For example, within the Material Deprivation subscale, headings have at least 4 indicators: Dietary Deprivation (5), Clothing Deprivation (6), Housing Deprivation (11), Deprivation of Home Facilities (12), Deprivation of the Environment (7), Deprivation of Location (5), Deprivation at Work (4), and Alternative Series on Deprivation at Work (6). Within the Social Deprivation subscale, each heading has at least 2 indicators: Lack of Rights in Employment (7), Deprivation of Family Activity (6),

Lack of Integration into Community (7), Lack of Formal Participation in Social Institutions (3), Recreational Deprivation (2), and Educational Deprivation (2).

What Statistical Procedures has the Scale been Subjected to? What are the psychometric properties?

Townsend (1987) reported that he expected to conduct detailed analyses on these indicators to confirm their appropriateness in the measurement of deprivation. Researchers interested in assessing deprivation with this questionnaire should request a copy of the results before including this measure in their investigations.

SOCIOECONOMIC STATUS (SES) MEASURES

The following are not developed scales, but suggestions of a variety of areas that may be important to examine in assessing the socioeconomic status of the population of clients one is working with.

POVERTY (items to consider measuring**)**

- neighborhood poverty, i.e. Tract & Block-group U.S. census (Bureau of Census, 1990)
- social class and employment status.
- composite of household income, education and occupational status (Knupfer & Room, 1970).
- work history, autonomy, and decision-making authority (suggested additions by Schneider, 1986)

EDUCATION LEVEL

- Earned school diplomas (high school, BS, graduate or professional, etc.)
- Patterns of schooling (i.e. only during non-harvest time, or year round schooling)

INSURANCE STATUS

- Insured or not
- Public or private insurance

SOCIAL ENVIRONMENT (Suggested by Lillie-Blanton & LaViest, 1996)

- Socio-economic (e.g. employment, education)
- Physical surroundings (e.g. neighborhood and work conditions, resources available)
- Social relations (e.g. within a community or workplace, i.e. segregation
- Power arrangements (e.g. political empowerment, individual and community control and influence)