

# Methodological Issues in Assessment Research With Ethnic Minorities

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Assessment research on ethnic minorities presents multiple methodological and conceptual challenges. This article addresses the difficulties in defining and examining ethnicity as a variable in psychological research. The authors assert that many of the problems stem from not making explicit the assumptions underlying the use of ethnicity as an explanatory variable and from inadequately describing cultural and contextual characteristics of ethnic minority samples. Also raised are common methodological problems encountered in examining race, ethnicity, and culture in assessment research, such as decisions regarding which populations to study, sampling methodologies, measure selection, method of assessment, and interpretation of results. Finally, some guidelines are offered for tackling some of the methodological dilemmas in assessment research with ethnic minorities.

Assessment research on ethnic minority groups has had a controversial history. For example, comparisons of intellectual abilities and cognitive skills, of self-esteem and self-hatred, of personality patterns, and of prevalence rates and degrees of psychopathology among different ethnic and racial groups have generated considerable controversy regarding the validity of findings. It is our belief that conducting valid assessment research with ethnic minority groups is particularly problematic because of methodological, conceptual, and practical difficulties that arise in such research. This article addresses common methodological problems that have plagued assessment research on ethnic minorities. Our intent here is not to provide definitive solutions to methodological problems but rather to raise issues that many researchers may not have otherwise considered, so that informed decisions can be made about how to handle variables related to ethnicity. We also pose some guidelines for future assessment research with ethnic minorities to improve the knowledge base not only for ethnic minorities but also for the field of psychological assessment. In doing so, we will closely examine fundamental problems such as sample heterogeneity, measurement of culture, and underlying assumptions about ethnicity, all of which make assessment research with ethnic minorities inherently challenging. Because our work involves Asian Americans, many of the cited examples deal with this population, although the point behind the examples may apply to other ethnic groups.

We refer to assessment research in a broad sense and use examples from extant literature on cognitive, personality, and clinical psychodiagnostic assessment with various ethnic mi-

nority groups. The focus is not on particular assessment instruments but on underlying conceptual and methodological issues with respect to ethnicity.

## Ethnicity and Race

### *Use of Terms*

From the outset, let us address some definitional issues. It must be noted that the notions of race and ethnic minority status are highly charged with potential political ramifications. A prevailing example of a classification system with vast political consequences is the use of the terms race and Hispanic origin by the U.S. Bureau of the Census, whose population count influences each region's allotment of federal funds as well as possible district realignment for voting purposes. The U.S. Bureau of the Census uses the following categories: White; Black; American Indian, Eskimo, or Aleut; Asian or Pacific Islanders; Hispanic origin (of any race); and Other. The use of the term "race" appears to imply biological factors, as races are typically defined by observable physiognomic features such as skin color, hair type and color, eye color, stature, facial features, and so forth. However, some researchers have argued that designation of race is often arbitrary and that within-race differences in even the physiognomic features are greater than between-race differences (Zuckerman, 1990), and this topic continues to be hotly debated (e.g., Yee, Fairchild, Weizmann, & Wyatt, 1993).

There is no one definition of ethnicity, race, and culture that is agreed on by all. Indeed, it is common for both researchers and others to refer to ethnicity, culture, and race interchangeably when identifying and categorizing people by background (Betancourt & Lopez, 1993). Granted, these terms are closely related, as illustrated by a definition of ethnic status provided by Eaton (1980, p. 160):

Ethnic status is defined as an easily identifiable characteristic that implies a common cultural history with others possessing the same characteristic. The most common ethnic "identifiers" are race, religion, country of origin, language, and/or cultural background.

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It is quite obvious that various characteristics serving as ethnic identifiers do not usually occur as independent features but appear in interrelated patterns and configurations (Dahlstrom, 1986), thus the common practice of interchanging the terms is understandable to a degree. However, confusion or a lack of differentiation among race, ethnicity, and culture at the terminology level likely reflects confusion at the conceptual level. That is, is the research concerned with race as a biological variable, ethnicity as a demographic variable, or some aspect of subjective cultural experience as a psychological variable?

Often, the implicit rationale behind grouping together individuals of the same racial or ethnic background and conducting assessment research using ethnicity as an independent or predictor variable is based on the assumptions that (a) these individuals share some common psychological characteristics associated with culture and (b) such shared cultural-psychological characteristics are related to personality or psychopathology. However, ethnicity is a demographic variable that is relatively distal to the variable of psychological or clinical interest. In many research studies, the participants' ethnicity may be serving as a proxy for psychological variables such as cultural values, self-concept, minority status, and so forth. Nonetheless, communications of findings (in the form of journal reports) often fail to clarify what assumptions were made about psychological characteristics of the particular sample in research studies. We believe that imprecisely using race and ethnicity to categorize individuals and then conducting studies on such population groups have contributed to the problems in assessment research with ethnic minorities. In the absence of each research study explicating the assumptions underlying the use of such categorical variables, we cannot assume that researchers are studying and communicating about the same constructs. Therefore, we echo the assertions made by Clark (1987) and by Betancourt and Lopez (1993) that research involving individuals from different ethnic and cultural backgrounds must specify and directly measure the underlying psychological variables associated with culture that are hypothesized to produce cultural or ethnic group differences.

#### *Individual Differences Versus Group Characteristics*

Some have argued that grouping together individuals based on ethnicity or race perpetuates unnecessary stereotyping or useless categorizations. Although we will, in the next section, point to the pitfalls of underestimating within-group heterogeneity, we still uphold the value of conducting research on broad groups of individuals classified into ethnic minority groups to the extent that as previously discussed, certain sets of characteristics covary with racial, ethnic, or cultural groups. After all, what is culture, if not a set of values and attitudes, a world view, and so forth that are shared by a large number of people who also share, to a greater or lesser extent, other demographic and physical characteristics? One caveat in examining characteristics of a broad group rests on a basic principle, namely, the greater the heterogeneity, the less precise the prediction is apt to be. Thus, although we may conclude that in general, White Americans are more individualistic than are Mexican Americans, we cannot predict with any certainty the level of individ-

ualism of a particular person. It is obvious that the confounding of an individual with the individual's culture results in stereotyping. Furthermore, an awkwardness exists when terms such as *Asian Americans* or *African Americans* are used because within-group heterogeneity cannot be conveyed by such terms. By making explicit the meaning of the terms and the context in which they are used, one can reduce some of the awkwardness.

#### **Common Methodological Problems**

Methodological problems with respect to ethnic minorities can occur at all stages of assessment research. We will examine salient issues in the stages of design (with respect to the population focus), sampling, measure selection and establishing equivalence of measures, method of assessment, and interpretation of data.

#### *Population Focus*

*Selecting participants.* In the initial design of assessment research, a salient dilemma confronting researchers may be which ethnic groups to include in the design and for what purpose. Let us examine two scenarios, one case in which the primary research question does not involve ethnicity or culture and another case in which the research question does concern ethnic minorities. In the scenario in which the main investigation does not involve ethnicity, a researcher must decide which ethnic minority group(s), if any, to include in the design. If ethnic minority individuals comprise a subsample that is too small with which to run separate or comparative analyses with the majority ethnic group, a researcher may choose to exclude them from analyses altogether. This certainly simplifies the problem, but it does not contribute to the much needed knowledge of whether the findings may be generalized to ethnic minorities. If a subsample of ethnic minorities is too small for meaningful analyses but large enough not to be discarded, a researcher must contend with the knowledge that observed variance in the variables of interest may contain some unmeasured or unanalyzed factors related to ethnicity. On the other hand, a well-intentioned researcher may collect data from sizable ethnic minority groups but without a sound conceptual basis or a planned course of analyses for handling the ethnicity variable. A common outcome in such a case may be that ethnicity is relegated to the status of an extraneous variable, to be dealt with as an afterthought in the analysis.

In the second scenario, where the primary research question is concerned with ethnic minorities (e.g., establishing psychometric properties of an established assessment measure for an ethnic minority group), a frequent dilemma involves deciding whether to collect data solely from the target ethnic minority group or to compare the ethnic minorities with a control group. It is a common practice to compare one or more ethnic minority groups with Whites on a psychological characteristic of empirical interest. A part of this practice is rooted in the existing research paradigm that emphasizes differences (with "statistical significance") across groups. And because many assessment measures and methods have been developed and normed on largely, if not exclusively, White populations (e.g., the original

Minnesota Multiphasic Personality Inventory; MMPI), researchers are taken to task to assess whether these measures and methods are psychometrically and practically valid with ethnic minorities. However, the race comparison paradigm should not go unquestioned. The comparative approach has been criticized for potentially reinforcing racial stereotypes or the interpretation of non-White behavior as deviant as well as underestimating or overlooking within-ethnic group variations (Azibo, 1988; Campbell, 1967; Graham, 1992). The question often posed is, Are within-group differences as important or as valid as between-group differences? An example of the dilemma was presented by Korchin (1980). Korchin wanted to assess the determinants of personality competence among two groups of African American men—those demonstrating exceptional and average competence. Results of the study were analyzed, and a paper on the study was submitted to a major journal. One of the paper's reviewers criticized the study as being "grievously flawed," because no White control group was employed. Korchin raised several questions. Why should a White control group have been employed when the purpose of the study was to analyze within-group differences? What would happen if someone submitted a study identical in all respects except that all participants were White? Would it be criticized because it lacked an African American control group? There are no easy answers to these questions. As suggested by Korchin, assumptions concerning the appropriateness of comparisons should be guided by the purpose of a particular study.

*Ethnic comparisons.* Once the question of population focus (i.e., inclusion or exclusion of specific ethnic minority groups) has been resolved, the next issue to consider is "matching" two or more ethnic groups for comparison purposes. Group comparisons are commonly achieved through two methods: (a) matching the participants a priori on the relevant but secondary variables or (b) controlling for those variables post hoc in analyses. With respect to matching, ethnic groups are typically matched on demographic characteristics such as age, sex, and possibly socioeconomic status, as well as defining characteristics such as psychiatric diagnoses. However, it may be difficult to match two or more ethnic groups on all relevant characteristics, as it has been well documented that various sectors of ethnic minority populations differ in the nature and distribution of characteristics. For example, American Indians have a much higher rate of unemployment, a larger number of individuals living under the poverty level, a higher school dropout rate, and a shorter life expectancy than other ethnic groups (LaFromboise, 1988). Graham (1992) noted the paramount importance of controlling for group differences in socioeconomic status when comparing African Americans and Whites, given overrepresentation of African Americans in economically disadvantaged segments of the population.

In deciding which variables need to be controlled for in the ethnic group comparisons, again, there is no agreed list of variables that are considered as essential control variables for each ethnic group. It is advised that variability in social and demographic characteristics (e.g., educational attainment, income level, language fluency, etc.) be statistically controlled in the analysis when ethnic differences exist on such variables and when the researcher has a reason to believe such differences may moderate the relationship between the variables of interest. A

potential problem that remains in matching participants or controlling for differences in social characteristics is that a researcher may assume, given similar demographics of two ethnic groups, that individuals constituting the study are similar on a number of other unmeasured variables. Some have argued that similar demographics may have different effects for ethnic minorities, such as the interactive effect of ethnicity and social class on stress and distress (Cervantes & Castro, 1985; Kessler & Neighbors, 1986). A more sophisticated understanding of psychological correlates of demographic characteristics, including ethnicity, is needed.

### *Sampling*

The design problem over inclusion or exclusion of ethnic minorities in assessment research is closely tied to problems in sampling. In this section we review specific sampling techniques used to identify and solicit participation of ethnic minority participants. Some of the examples for obtaining ethnic minority samples are not from personality assessment research but from epidemiological and community studies targeting subclinical or nonclinical ethnic minority populations. They are used here as illustrations of methods for obtaining difficult-to-reach samples.

*Identifying participants.* Foremost in the sampling problem is identifying the ethnicity of participants. Self-identification of ethnicity by participants' self-report is the most common method, and this is most often accomplished by a limited categorical listing of ethnic groups, as defined by the investigator. Ethnicity may be defined at a broad level (e.g., Latino or Hispanic) or at a more specific level (e.g., Puerto Rican, Mexican American, etc.). Researchers are also faced with the decision of how to classify persons of mixed racial or ethnic backgrounds (see Hall, 1992; Root, 1992). Another method for identifying potential participants' ethnicity is through the surname identification method. Some ethnic groups such as Asians and Hispanics have unequivocally ethnic surnames (e.g., "Kim" for Koreans, "Nguyen" for Vietnamese, and "Gutierrez" for Latino), which enables surname-based community sampling methodology. Indeed some studies have used surnames or other key characteristics as the sole basis for determining participants' ethnicity (e.g., Dion & Giordano, 1990; Dion & Toner, 1988). This method for ascertaining the ethnicity of participants (i.e., without cross-validation from the participants) is sometimes the only option, particularly when working with archival data, but this obviously limits the certainty with which the results may be interpreted. There are further issues with respect to identification of ethnicity. Sasao and Sue (1993) pointed to the faulty but commonly made assumption that once individuals are identified as belonging to a certain ethnic-cultural group, they share a common understanding of their own ethnicity or culture and identify with the ethnic-cultural group. To illustrate, in a high school drug abuse survey conducted in multicultural communities in Southern California (Sasao, 1992), approximately 20% of the Chinese American students indicated their primary cultural identification was Mexican, though the self-perceived ethnicity of these Chinese students was Chinese.

*Small sample size.* Collecting data from a large enough sample of ethnic minorities has long posed a challenge, partly because of the small overall population size. Let us take the example of American Indians (technically categorized as American Indians, Eskimo, or Aleut by the U.S. Bureau of the Census), who comprised only 0.8% of the total U.S. population according to the 1990 U.S. Census (U.S. Bureau of the Census, 1991). American Indian populations tend to be geographically much more concentrated than does the general U.S. population, as the majority of American Indians lived in just six states in 1990. The American Indian population was highest in Alaska, where it comprised about 16% of that state's total population, but there were 35 states in which American Indians represented less than 1% of the total population of each state in 1990 (U.S. Bureau of the Census, 1991). About half of the American Indian population lives in urban areas and about half lives rural areas or areas on or adjacent to reservations that are located in the Plains States (Bureau of Indian Affairs, 1991). Thus, locating an adequate sample size of American Indian participants is difficult, if not impractical, in many states and regions.

The problem of small sample size often results in researchers combining the data from a number of ethnic-cultural groups with some common origin (e.g., combining Chinese Americans, Japanese Americans, and Korean Americans into one group), or in the case of American Indians, across tribal groups (e.g., combining Hopis, Lakotas, and Navahos into one group). However, broadening the ethnic grouping increases heterogeneity. Again, taking the case of American Indians, there are over 510 federally recognized tribes, including more than 200 Alaskan Native villages (Bureau of Indian Affairs, 1991). American Indian tribes vary enormously in customs, language, and type of family structure, so much so that Tefft (1967) argued that differences between certain tribal groups are greater than those between Indians and Whites on some variables. American Indian individuals also vary in their degree of acculturation and exposure to tribal or White American cultures, whether they live on or off a reservation, ethnic or tribal identification, experience with racism, and so forth. Given such a list of even the most basic sources of sample heterogeneity, a researcher is inevitably faced with the decision of which sources of variability can or cannot be overlooked in aggregating individuals into an ethnic group classification. This discussion is not to underestimate the cultural diversity within the White American population; in fact, it is intended to stimulate a more refined treatment of ethnicity and culture in psychological research.

*Recruiting participants.* In efforts to recruit ethnic minority participants, researchers must consider possible ethnic and cultural differences in participants' likelihood to participate in psychological assessment research. Are ethnic minorities less likely to cooperate with research? Are the rates of attrition from research studies equal across ethnic groups? For some ethnic groups, cultural values may influence their participation or response patterns in research. Ying (1989) analyzed the cases of nonresponse to Center for Epidemiological Studies-Depression scale (CES-D) items in a community sample of Chinese Americans. The original study was conducted as a telephone interview study with randomly selected Chinese-surnamed households listed in the San Francisco public telephone directory. Ying

found that demographic factors such as age, sex, and education as well as item content were related to the rates of nonresponse to CES-D items. Ying explained that older Chinese women were less likely to be familiar with telephone surveys, the methodology which, in and of itself, may reflect a middle-class American lifestyle and set of values. Older Chinese women may experience being questioned by a stranger about mood and somatic symptoms as foreign and intrusive yet refrain from directly refusing to participate because such behavior would be too assertive and impolite. For other Chinese community cohorts such as middle-aged Chinese men, endorsement of positive feelings (e.g., feeling good about self or feeling happy and enjoying life) may be regarded as indicative of immodesty and frivolousness in Chinese culture, thus such values may also contribute to nonresponse. This type of in-depth analysis of nonresponse illustrates the importance of considering the potential influence of cultural and social norms in responding to and participating in psychological research.

*Use of college samples.* For ethnic minority groups for which it is extremely difficult to obtain a large community sample of participants, sampling from college populations is a particularly attractive and viable option because of the ease of access to a relatively large captive pool of potential participants. For example, a significant portion of Asian American personality and psychopathology literature has been conducted with college students (Leong, 1986; Uba, 1994). This sampling strategy clearly impacts the question of representativeness of the sample. Sears (1985) argued that a significant portion of psychological research is conducted with college sophomores, and he pointed to the hazards of basing much of what we know about human processes on a sample not representative of the larger population. Sears named a number of differences between American college undergraduates and the general population, such as education, test-taking experience, and restricted age range, which in turn are associated with intrapsychic characteristics such as a less than fully formulated sense of self, less crystallized social and political attitudes, highly unstable peer relationships, and so forth. The same criticisms apply to assessment research with ethnic minorities, and the representativeness of ethnic minority college students must be carefully assessed, not only with respect to socioeconomic and educational attainment of student participants in relation to their age cohorts who do not attend college but also with respect to a correspondent set of values and attitudes, a limited range of political awareness of self-identification, and an American education. For language minority groups such as some American Indians, immigrant Asian Americans, and immigrant Latinos (and some would argue African Americans; see Helms, 1992), good or adequate English language skills are necessary to gain entrance into colleges and universities. However, those with university-level English skills may not be representative of a significant portion of immigrant ethnic minorities. Ethnic minority college samples tend to underestimate both the demographic and the psychosocial diversity of the larger ethnic minority populations. Consequently, sample heterogeneity, as high as it may be in college samples, may still be an underestimate of true population heterogeneity.

*Use of community samples.* Given the questionable generalizability of research studies with ethnic minority college stu-

dents to the ethnic community population at large, it is often desirable, although also extremely challenging, to sample from ethnic minority communities. Many research studies conducted with ethnic minorities in the community rely on systematic or captive sampling or snowball sampling (a method in which one starts with a known group of participants, and recruits more participants through contacts) in intact ethnic groups or organizations such as churches, temples, professional associations, political organizations, social clubs, kinship associations, and so forth. It is clear that each of these organizations attracts a subsample of the target ethnic community, and the results cannot be easily generalized to the entire group. Sasao and Sue (1993) criticized psychological research with ethnic minorities for its lack of ecological and contextual considerations. Specifically, Sasao and Sue argued that too often, research ignores the societal context in relation to other relevant ethnic-cultural community groups. Many psychological characteristics of clinical interest may be greatly influenced by the target community group's geographical and political context in which ethnic minority individuals function, such that psychological research on African Americans in South Central Los Angeles must take into account the community's relation to Korean Americans and the contemporary political climate. When the research question involves the assessment of psychopathology, studies may be conducted with those ethnic minority participants who utilize clinical services. There is some evidence to indicate differential patterns of mental health services utilization among different ethnic minority groups (Sue, Fujino, Hu, Takeuchi, & Zane, 1991), thereby making it difficult to assess the generalizability of the findings. Clearly, the procurement of representative and adequately sized samples of ethnic minorities poses a considerable methodological challenge.

### *Establishing Equivalence of Measures*

One goal of assessment research with ethnic minorities is to conduct reliable and valid assessment while minimizing cultural or ethnic bias. Use of assessment measures in research with ethnic minorities presents several problems, primarily with respect to equivalence. Brislin (1993) discussed three types of equivalence (translation, conceptual, and metric) as being of foremost concern in cross-cultural research methodology. To the extent that assessment research is concerned with effects of culture on assessed psychological characteristics among ethnic minorities, the cross-cultural principles apply to research with ethnic minorities.

Although some of the frequently used assessment instruments such as the Wechsler scales, the SCL-90-R, the Zung Self-Rating Depression Scale, and the MMPI have been translated into languages such as Spanish, Japanese, and Chinese, researchers and clinicians are often faced with the sheer lack of relevant assessment measures in the language of the target ethnic minority populations that also have established translation equivalence. Importantly, linguistic equivalence issues also cannot be ignored for ethnic minority participants who are functionally English-speaking. For example, Helms (1992) argued that most African Americans in the United States are probably exposed to some versions of both Black and White English, yet

commonly used standardized tests are in White standard English. A recent study examining Spanish-English bilingualism among Hispanic immigrants (Bahrick, Hall, Goggin, Bahrick, & Berger, 1994) indicated a complex interaction among language dominance, the assessment task (e.g., oral comprehension, vocabulary recognition, category generation, etc.), age at immigration, and other factors. Such findings suggest that the type of language skills used to assess bilingual participants in either English or their first language may influence some results.

In the absence of appropriate assessment measures for which the translated versions' psychometric properties have been established, a researcher may choose to translate and adopt the instrument to the ethnic minority group of research interest. In order to ensure that a newly translated measure has achieved translation equivalence, a multistep method has been recommended, in which translation (e.g., from English to Spanish) is followed by back translation (from Spanish to English), comparison of the two versions (e.g., English and English), revisions in the translation, and so forth (Brislin, 1993). Geisinger (1994) has outlined a set of rigorous methodological steps for translating an assessment instrument and adopting it to a new culture. However, it must be acknowledged that carefully following the methodological steps suggested by Geisinger and performing psychometric analyses would require multiple, adequately sized samples of ethnic minorities, leaving the researcher once again with dilemmas in obtaining large sample sizes.

Conceptual equivalence is concerned with whether the psychological construct under investigation (e.g., depression, intelligence, or assertiveness) holds the same meanings in two or more cultural groups. Conceptual equivalence of a construct may be highly dependent on the context in which the assessment takes place. Although this may be true for any participant population, researchers must be aware that for ethnic minorities, variability of and sensitivity to contextual factors may be increased as they move between a traditional cultural setting (e.g., family and ethnic communities) and a more mainstream American cultural setting (e.g., work, school, etc.). For example, in assessing the meaning of aggressiveness in youths, an assessment may be conducted in a school setting, in which Latinos, Asians, and Whites share the same environmental space, and to a large extent, the same ecological context. If the construct is found to be equivalent in this setting, it may not necessarily translate into conceptual equivalence in other settings, such as the family or the street culture.

Metric equivalence refers to the assumption that the same metric can be used to measure the same concept in two or more cultures. For example, the test score of 100 for a White participant is assumed to be interpretable in the same manner as the test score of 100 for a Mexican American participant. Metric equivalence is often overlooked or assumed without empirical validation in research with ethnic minorities, particularly if the measure does not involve translation. The danger of assuming equivalence of translated measures was illustrated by an analysis comparing the Wechsler Adult Intelligence Scale (WAIS) and its Spanish adaptation, Escala de Inteligencia Wechsler para Adultos (EIWA; Lopez & Romero, 1988), in which major differences between the two instruments were found with re-

spect to the conversion of raw scores to scale scores, administration, and content. Lopez and Romero pointed to the importance of noting the rural, less educated characteristics of the Puerto Rican sample on which the EIWA was normed, and concluded that "psychologists should not expect the scores of the EIWA to be comparable with those of the WAIS, and perhaps even with the scores of the WAIS-R" (Lopez & Romero, 1988 p. 269). It is also critical to note here the heterogeneity within an ethnic minority group (e.g., rural Puerto Rican vs. urban Mexican American), which may be underestimated or overlooked because of a common language (in this case, Spanish) when a translated version is available.

In research, psychometric statistical analyses are often performed in order to address equivalence problems of a measure across ethnic groups. For example, Ben-Porath (1990) advocated the use of replicatory factor analysis (i.e., using the same factor analytic method to examine the factor structure of a newly translated or adopted instrument that was used in the original measure) to establish cross-cultural validity of the instrument. Ben-Porath also suggested that prior to conducting factor analyses, it is important to examine the distribution of the scale items across ethnic and cultural groups in order to detect possible range restrictions and outliers. This is particularly vital to the assessment studies involving ethnic minorities, as Helms (1992) cautioned that cultural and interethnic factors may compromise the basic assumptions underlying statistics, such as independence of ethnic groups with respect to culture or equal range and variance between ethnic groups. Regression analyses have also been used to study instrument or test bias, specifically to examine whether tests make predictions that are similar, and similarly accurate, to those of a criterion measure. If, for example, regression slopes for a test or evaluation procedure and a criterion differ for different groups, test bias exists. Such studies require that fairly clear-cut criteria can be found on which to judge the adequacy of predictors. An example of this approach was provided by Timbrook and Graham (1994), who examined ethnic differences between African Americans and Whites in the restandardization sample of the MMPI-2. The researchers used ratings of interpersonal behavior and personality characteristics of the participants made by their partners as external criteria against which the accuracy of predictions of five MMPI-2 clinical scales could be examined. Regression equations were developed to predict the partner rating scale scores, and no ethnic differences were found on the accuracy of the MMPI-2 scale predictions.

### *Methods of Assessment*

Thus far, our discussion of methodological issues in measure selection for use with ethnic minorities has been primarily focused on standardized objective personality assessment measures (with the exception of the Wechsler scales), most often of the self-report variety. However, it is debatable whether some methods of assessment may be more likely to result in cultural or ethnic bias than others. There are at least three approaches to assessment that have been understudied with respect to ethnic minorities: (a) behavioral observations, (b) qualitative assessment, and (c) projective tests. One major question for ethnic mi-

norities whether behavioral observation methods are more prone to bias than self-report instruments, whether qualitative assessment is more prone to bias than quantitative data, or whether projective tests are more prone to bias than objective tests.

Surveying the assessment research on ethnic minorities, there is a shortage of assessment methodology using observational data. Behavioral observation methodologies often involve in-depth, microlevel analysis of behavior. Although largescale surveys are necessary in order to obtain some normative information on ethnic minorities, the field is ripe for a contribution in microlevel analysis as well. The behavioral observation methods also have the advantage of requiring relatively small sample sizes that are necessary to conduct analyses, although generalizability to the larger population is likely to be compromised with potential self-selection of ethnic or cultural minority participants who are willing to participate in such in-depth assessment research.

Psychological assessment research, which is heavily rooted in psychometric tradition, has favored quantitative research. Although the limitations of qualitative methodologies must be acknowledged, little empirical work has examined the relative advantages and disadvantages of collecting qualitative data from ethnic minorities. Brink (1994) argued that purely quantitative measurement methodologies used to assess ethnic minority populations (e.g., elderly Hispanics) are insufficiently sensitive to cultural factors and recommended integrating psychometric data with qualitative methodologies (e.g., in-depth interviews and life histories).

Finally, some have argued that cross-cultural (and by extension, ethnic minority) research may have prematurely dismissed and usefulness of projective measures of assessment because of the assumption that such instruments are too rooted in Western culture (Draguns, 1990). The problem here is the lack of empirical evidence to argue for or against the notion that ambiguous stimuli used in projective tests are less culturally bound but that clinical interpretations are more prone to bias by the interpreter's cultural background. Research on the use of projective tests with Asian Americans is notably absent (Okazaki & Sue, 1995), but a body of research exists on the use of the Rorschach and picture-story tests (e.g., the Thematic Apperception Test) with African Americans, Latinos, and several American Indian tribes (see Gray-Little, 1995; Rogler, Malgady, & Rodriguez, 1989; Velasquez, 1995). Increased attention in ethnic minority assessment research to various methods of assessment is consistent with recommendations made by cross-cultural methodologists to use multiple assessment measures to establish convergent validity of cultural constructs.

### *Interpretation of Data*

A common problem in conducting ethnic comparison research is that differences tend to be evaluated in disfavor of ethnic minorities. For example, Rogler, Malgady, and Rodriguez (1989) argued that ethnic differences on personality measures are often interpreted negatively from the Western perspective. In the case of Latinos, their scores on personality measures are often interpreted as indicating low verbal fluency, less emo-

tional responsiveness, and more pathology, all of which are considered as undesirable characteristics in American society. However, the same scores may be interpreted as reflecting appropriate restraint and respect for authority. In a study comparing clinical evaluations by Chinese American and White therapists of the same clients (either Chinese American or White), therapists' ratings of client functioning have been found to vary as a function of the interaction of therapist and client ethnicity (Li-Repac, 1980), which suggests interpretive bias. At the same time, one must also be aware of the danger of underestimating pathology for culturally different clients through overattribution of bizarre behavior or thought patterns to that person's culture (Lopez, 1989). It is essential to be aware of possible cultural bias, either in overpathologizing or underpathologizing ethnic minorities when interpreting ethnic differences on assessment measures.

### Guidelines

Based on the various methodological issues we have raised with respect to assessment research with ethnic minorities, we summarize several guidelines for considering ethnicity and related variables below.

1. Assumptions underlying the use of ethnicity should be made explicit. A researcher must ask, Is the research concerned with ethnicity as a demographic variable, or is it being used as a proxy for a psychological construct hypothesized to covary with ethnicity?

2. Research reports should contain more elaborated, fuller discussions of the sample and the sampling methodology used. That is, rather than merely indicating the number of African Americans, Asian Americans, Latinos, and American Indians included in the sample, details should be made explicit on variables such as generational status, acculturation, self-identification, ethnic and cultural composition of the neighborhoods or communities, and so forth. Such discussions will help promote better communication among researchers and focus future research efforts by identifying what we know about whom.

3. Given inherent problems with small sample size in ethnic minority research, we suggest the following strategies to maximize the significance of each study: (a) For studies examining ethnic differences on various assessment instruments, enough details regarding the sampling methodology, data analyses, and statistical findings should be reported to allow meta-analyses and cross-study comparisons and (b) individual studies with small samples of ethnic minorities should test specific cultural hypotheses that may contribute to ethnic variance on assessment processes or instruments, with increased attention on whether statistically significant ethnic differences are also clinically significant (see Timbrook and Graham, 1994, for an example of this approach).

4. Individual studies should consider using multiple measures and multiple methods of assessments. Given that many assessment tools and instruments have not been widely used or cross-culturally validated with ethnic minority groups, it is advisable to use several different measures in order to test convergent validity. To the extent that results converge, there is incremental validity.

5. Expert cultural or ethnic consultants should be involved in evaluating the translation and conceptual equivalence of the measures prior to data collection or in interpreting the results of studies. These consultants can often provide the cultural context for anticipating and interpreting the responses of ethnic minorities.

6. Findings from assessment tools pertinent to ethnic and cultural variables should generate hypotheses for further testing or confirmation rather than routine assumptions that the findings are valid.

### Conclusion

Little attention in the past has been paid to the relevance of ethnicity and cultural issues in psychological research. Graham (1992) recently conducted a content analysis of empirical articles concerned with African Americans that were published in six top psychology journals between 1970 and 1989. The results, which indicated a decline in the amount of African American research over the years and a relative lack of methodological rigor of existing research, were a sobering indictment of the scientific psychological community's level of sophistication in examining ethnic and cultural factors. Lack of research, training, or both in cross-cultural assessment often leads to misdiagnosis, overestimation, underestimation, or neglect of psychopathology, which in turn has grave consequences, such as treatment failure, at individual levels (Westermeyer, 1987).

However, assessment research with ethnic minorities should not be encouraged merely because of a potential for negative consequences in neglecting ethnic minorities. As noted by proponents of cross-cultural psychology, studies of cultural variations are good for both psychology and science (Triandis & Brislin, 1984). For one, the inclusion of ethnicity and culture-related variables increases the range of human behavior variables to explore and understand. For instance, an examination of the collectivism-individualism dimension of interpersonal orientation within the middle-class White American college student population will yield a fairly narrow and skewed range. By including ethnic minorities and individuals from other cultures, the full range of this construct as well as its relationship to other personality and clinical variables can be fruitfully examined. Another advantage to including ethnic and cultural variables in research is that it provides a better test of theories. Establishing the generalizability or limitations of personality theories and of assessment tools through systematic testing with a broad range of individuals benefits the field (Ben-Porath, 1990). And lastly, the American Psychological Association (APA) Board of Ethnic Minority Affairs in 1991 developed a set of guidelines for providers of psychological services to ethnically, linguistically, and culturally diverse populations (APA, 1993), which parallels the APA Ethical Standards guidelines. It is clearly stated in this guideline (APA, 1993, p. 46) that:

Psychologists consider the validity of a given instrument or procedure and interpret resulting data, keeping in mind the cultural and linguistic characteristics of the person being assessed. Psychologists are aware of the test's reference population and possible limitations of such instruments with other populations.

Hence, it is crucial that research on the validity of various assessment tools and procedures for ethnic minority population continue to add to the necessary database in order for the psychological community to responsibly carry out these guidelines.

There are many methodological challenges to conducting assessment research with ethnic minorities, but this is not a cause for throwing out the baby with the bath water. By making explicit the assumptions underlying the use of ethnicity as a predictor variable, the collective scientific community will begin to differentiate between racial stereotypes and legitimate uses of ethnic or cultural generalizations.

### References

- American Psychological Association (1993). Guidelines for providers of psychological services to ethnic, linguistic, and culturally diverse populations. *American Psychologist*, 48, 45-48.
- Azibo, D. A. (1988). Understanding the proper and improper usage of the comparative research framework. *Journal of Black Psychology*, 15, 81-91.
- Bahrnick, H. P., Hall, L. K., Goggin, J. P., Bahrnick, L. E., & Berger, S. A. (1994). Fifty years of language maintenance and language dominance in bilingual Hispanic immigrants. *Journal of Experimental Psychology: General*, 123, 264-283.
- Ben-Porath, Y. S. (1990). Cross-cultural assessment of personality: The case for replicatory factor analysis. In J. N. Butcher & C. D. Spielberger (Eds.), *Advances in Personality Assessment* (Vol. 8, pp. 27-48). Hillsdale, NJ: Erlbaum.
- Betancourt, H., & Lopez, S. R. (1993). The study of culture, ethnicity, and race in American psychology. *American Psychologist*, 48, 629-637.
- Brink, T. L. (1994). The need for qualitative research on mental health elderly Hispanics. *International Journal of Aging and Human Development*, 38, 279-291.
- Brislin, R. W. (1993). *Understanding culture's influence on behavior*. New York: Harcourt Brace Jovanovich.
- Bureau of Indian Affairs. (1991). *American Indians today* (3rd ed.). Washington, DC: U.S. Department of the Interior.
- Campbell, D. T. (1967). Stereotypes and the perception of group differences. *American Psychologist*, 22, 817-829.
- Cervantes, R. C., & Castro, F. G. (1985). Stress, coping, and Mexican American mental health: A systematic review. *Hispanic Journal of Behavioral Sciences*, 7, 1-73.
- Clark, L. A. (1987). Mutual relevance of mainstream and cross-cultural psychology. *Journal of Consulting and Clinical Psychology*, 55, 461-470.
- Dahlstrom, W. G. (1986). Ethnic status and personality measurement. In W. G. Dahlstrom, D. Lacher, & L. E. Dahlstrom, *MMPI patterns of American minorities* (pp. 3-23). Minneapolis: University of Minnesota Press.
- Dion, K. L., & Giordano, C. (1990). Ethnicity and sex as correlates of depression symptoms in a Canadian university sample. *International Journal of Social Psychiatry*, 36, 30-41.
- Dion, K. L., & Toner, B. B. (1988). Ethnic differences in test anxiety. *Journal of Social Psychology*, 128, 165-172.
- Draguns, J. G. (1990). Applications of cross-cultural psychology in the field of mental health. In R. W. Brislin (Ed.), *Applied cross-cultural psychology* (pp. 302-324). Newbury Park, CA: Sage.
- Eaton, W. W. (1980). *The sociology of mental illness*. New York: Praeger.
- Geisinger, K. F. (1994). Cross-cultural normative assessment: Translation and adaptation issues influencing the normative interpretation of assessment instruments. *Psychological Assessment*, 6, 304-312.
- Graham, S. (1992). "Most of the subjects were White and middle class": Trends in published research on African Americans in selected APA journals, 1970-1989. *American Psychologist*, 47, 629-639.
- Gray-Little, B. (1995). The assessment of psychopathology in racial and ethnic minorities. In J. N. Butcher (Ed.), *Clinical personality assessment: Practical approaches* (pp. 140-157). New York: Oxford Press.
- Hall, C. C. I. (1992). Please choose one: Ethnic identity choices for biracial individuals. In M. P. P. Root (Ed.), *Racially mixed people in America* (pp. 250-264). Newbury Park, CA: Sage.
- Helms, J. E. (1992). Why is there no study of cultural equivalence in standardized cognitive ability testing? *American Psychologist*, 47, 1083-1101.
- Kessler, R. C., & Neighbors, H. W. (1986). A new perspective on the relationships among race, social class and psychological distress. *Journal of Health and Social Behavior*, 27, 107-115.
- Korchin, S. J. (1980). Clinical psychology and minority problems. *American Psychologist*, 35, 262-269.
- LaFromboise, T. D. (1988). American Indian mental health policy. *American Psychologist*, 43, 388-397.
- Leong, F. T. L. (1986). Counseling and psychotherapy with Asian-Americans: Review of the literature. *Journal of Counseling Psychology*, 33, 196-206.
- Li-Repac, D. (1980). Cultural influences on clinical perception: A comparison between Caucasian and Chinese-American therapists. *Journal of Cross-Cultural Psychology*, 11, 327-342.
- Lopez, S. R. (1989). Patient variable biases in clinical judgment: Conceptual overview and methodological considerations. *Psychological Bulletin*, 106, 184-204.
- Lopez, S., & Romero, A. (1988). Assessing the intellectual functioning of Spanish-speaking adults: Comparison of the EIWA and the WAIS. *Professional Psychology: Research and Practice*, 19, 263-270.
- Okazaki, S., & Sue, S. (1995). Cultural considerations in psychological assessment of Asian Americans. In J. N. Butcher (Ed.), *Clinical personality assessment: Practical approaches* (pp. 107-119). New York: Oxford Press.
- Rogler, L. H., Malgady, R. G., & Rodriguez, O. (1989). *Hispanics and mental health: A framework for research*. Malabar, FL: Krieger.
- Root, M. P. P. (1992). Back to the drawing board: Methodological issues in research on multiracial people. In M. P. P. Root (Ed.), *Racially mixed people in America* (pp. 181-189). Newbury Park, CA: Sage.
- Sasao, T. (1992). *Correlates of substance use and problem behaviors in multiethnic high school settings*. Unpublished manuscript, University of California, Los Angeles.
- Sasao, T., & Sue, S. (1993). Toward a culturally anchored ecological framework of research in ethnic-cultural communities. *American Journal of Community Psychology*, 21, 705-727.
- Sears, D. O. (1985). College sophomores in the laboratory: Influences of a narrow data base on psychology's view of human nature. *Journal of Personality and Social Psychology*, 51, 515-530.
- Sue, S., Fujino, D. C., Hu, L., Takeuchi, D., & Zane, N. W. S. (1991). Community mental health services for ethnic minority groups: A test of cultural responsive hypothesis. *Journal of Consulting and Clinical Psychology*, 59, 533-540.
- Tefft, S. K. (1967). Anomie, values, and culture change among teen-age Indians: An exploratory study. *Sociology of Education*, 40, 145-157.
- Timbrook, R. E., & Graham, J. R. (1994). Ethnic differences on the MMPI-2? *Psychological Assessment*, 6, 212-217.
- Triandis, H. C., & Brislin, R. W. (1984). Cross-cultural psychology. *American Psychologist*, 39, 1006-1016.



- Uba, L. (1994). *Asian Americans: Personality patterns, identity, and mental health*. New York: Guilford.
- U.S. Bureau of the Census. (1991). *Race and Hispanic origin. 1990 Census Profile (No. 2)*. Washington, DC: U.S. Department of Commerce.
- Velasquez, R. J. (1995). Personality assessment of Hispanic clients. In J. N. Butcher (Ed.), *Clinical personality assessment: Practical approaches* (pp. 120-139). New York: Oxford Press.
- Westermeyer, J. (1987). Cultural factors in clinical assessment. *Journal of Consulting and Clinical Psychology, 55*, 471-478.
- Yee, A. H., Fairchild, H. H., Weizmann, F., & Wyatt, G. E. (1993).

Addressing psychology's problems with race. *American Psychologist, 48*, 1132-1140.

- Ying, Y. (1989). Nonresponse on the Center for Epidemiological Studies-Depression scale in Chinese Americans. *International Journal of Social Psychiatry, 35*, 156-163.
- Zuckerman, M. (1990). Some dubious premises in research and theory on racial differences: Scientific, social, and ethical issues. *American Psychologist, 45*, 1297-1303.

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### Call for Nominations

The Publications and Communications Board has opened nominations for the editorships of the *Journal of Experimental Psychology: Animal Behavior Processes*, the "Personality Processes and Individual Differences" section of the *Journal of Personality and Social Psychology*, the *Journal of Family Psychology*, *Psychological Assessment*, and *Psychology and Aging* for the years 1998-2003. Stewart H. Hulse, PhD; Russell G. Geen, PhD; Ronald F. Levant, EdD; James N. Butcher, PhD; and Timothy A. Salthouse, PhD, respectively, are the incumbent editors.

Candidates should be members of APA and should be available to start receiving manuscripts in early 1997 to prepare for issues published in 1998. Please note that the P&C Board encourages participation by members of underrepresented groups in the publication process and would particularly welcome such nominees.

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