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Measuring Acculturation: Where We Are and Where We Need to Go

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Acculturation measures intend to capture the psychological, behavioral, and attitudinal changes that occur when individuals and groups from different cultures come into continuous contact with each other. This article examines the most prominent theoretical models and assumptions that drive acculturation measures. Examples of Hispanic acculturation measures are used to illustrate how these theoretical foundations are applied in empirical measures. Particular emphasis is given to discussing the strengths and limitations of two bidimensional measures, the Bidimensional Acculturation Scale for Hispanics (BAS) and the Acculturation Rating Scale for Mexican Americans–Revised (ARSM-A-II). Recommendations for improving these measures are presented. Moving beyond proxy measures, improving the operationalization of acculturation indicators, and incorporating theoretical models, as well as contextual variables, are the key recommendations presented for improving measures of acculturation.

Keywords: *acculturation; acculturation theory; acculturation measures*

Acculturation entails the social and psychological exchanges that take place when there is continuous contact and interaction between individuals from different cultures (Berry, 1997; Redfield, Linton, & Herskovits, 1936; Ryder, Alden, & Paulhus, 2000). These changes can be observed across a number of different domains such as attitudes, values, behaviors, and sense of cultural identity (Cuéllar, Arnold, & Maldonado, 1995; Ryder et al., 2000). Two distinct theoretical frameworks have dominated the study of this complex cultural phenomenon. One camp of researchers stipulates that accultura-

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tion is a unidimensional construct that can be conceptualized along a single continuum, ranging from the immersion in the person's culture of origin to the immersion in the dominant or host culture (e.g., Cuéllar, Harris, & Jaso, 1980; Gordon, 1995). A competing perspective argues that acculturation consists of two distinct independent dimensions, adherence to the dominant culture and maintenance of the culture of origin (e.g., Berry, 1997; Magaña, De la Roncha, Amsel, Fernandez, & Rulnick, 1996; Marín & Gamba, 1996; Rogler, Cortés, & Malgady, 1991; Ryder et al., 2000). The use of these two models has produced a prolific literature that has explored the multiple changes that occur when individuals adapt to different cultural environments. The fields of cross-cultural psychology, social psychology, and sociology have produced a knowledge base that has laid the theoretical and empirical foundations of acculturation research. The purpose of this article is to explore how these theoretical foundations—particularly the unidimensional and bidimensional perspectives—influence the empirical measures of acculturation. The strengths and limitations of these models are discussed.

To facilitate understanding of this complex concept, measurement discussions concentrate on acculturation measures and scales constructed for Hispanic groups residing in the United States (e.g., Mexicans, Puerto Ricans, Cubans). The author contends that this literature presents interesting and clear examples of the empirical and theoretical challenges of measuring acculturation. A critique of two promising bidimensional measures for Hispanics (BAS and ARMSA-II) is presented. Last, recommendations for improving and overcoming limitations of acculturation measures as well as considerations for future research are discussed.

Acculturation: Definition and Contextual Factors

The classic definition stipulates that “acculturation comprehends those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original culture patterns of either or both groups” (Redfield et al., 1936, p. 149). Although the changes implied in this definition can affect either or both of the groups involved, most theories and measures that use this definition intend to capture the changes that occur in the group and individuals that are being acculturated to a dominant culture (Berry & Sam, 1996). In other words, acculturation has tended to be defined as those psychological and social changes that groups and individuals experience when they enter a new and different cultural context. This classic definition implies that acculturation is an interactive, developmental, multifactorial, and multidimensional process (Cuéllar et al., 1995). Measures that abide by this definition assume

that acculturation affects individuals at different levels of functioning such as behavioral, affective, and cognitive (Cuéllar et al., 1995).

One of the difficulties of specifying the different domains (e.g., values, attitudes, interpersonal relationships, language, behaviors) that are affected by this cultural process is that acculturation can be viewed as a group or individual phenomenon. Acculturation has a dualistic effect; it affects the culture of a group as well as changes the psychology of an individual (Berry & Sam, 1996). Although acculturation may have a profound effect on a given group, individuals within that group vary greatly in the extent to which they experience and adapt to these changes (Berry, 1997; Berry & Sam, 1996). For instance, a given Mexican community in the United States may be considered to have acculturated to American culture because a large group of its members have learned to speak English. Although this observation of the group may be correct, individuals within the community may differ significantly in their level of acculturation and vary in the ways they have adapted to American culture. It is this individual-level variability that most acculturation measures intend to capture. Although group-level effect is important for gaining a deeper understanding of acculturation experiences and may serve as a link between social forces (e.g., attitudes toward immigrants, immigration policies, institutional racism) and acculturation trajectory of groups, this article concentrates on individual-level analysis of acculturation.

Before turning to the theoretical models of acculturation, the contextual factors that affect the phenomenon of acculturation must be considered first. Although these contextual factors are usually overlooked in the measurement of acculturation, they have a direct impact on how individuals adapt to a new culture. One of the principal issues that needs to be considered in the study of acculturation is how acculturating individuals come into this process. Berry (1997) identified three key factors (voluntariness, mobility, and permanence) that influence how groups enter this cultural process.

Following Berry's (1997) framework, some individuals come into the acculturation process either on a voluntary basis (e.g., immigrants, sojourners) or are forced to acculturate (e.g., refugees). The entry into this process may be because of a physical move into a new environment (e.g., immigrants) or through the colonization of territories (e.g., indigenous). Moreover, some tend to settle permanently in the new environment (e.g., ethnocultural) whereas others tend to move from one cultural environment to another (e.g., sojourners).

Despite the environmental, cultural, and economic changes inherent in these modes of entry and settlement, the general processes of adaptation to a new society appear to be common for all of the acculturating groups (Berry, 1997; Berry & Sam, 1996). This universal perspective of acculturation con-

tends that what varies from individual to individual in these groups is the course of adaptation, the level of difficulty (e.g., stress) experienced throughout the process, and the actual outcome of the acculturation experience (Berry, 1997, 1998). Adding to these contextual variations, Rogler (1994) stated that alternation in social networks as well as the movement from one economic system to another has a moderating effect in the acculturation experience of migrant groups. In other words, the disruption of social networks and the creation of new links, as well as the incorporation into a new economic system, influence the process of adaptation into a new environment (Rogler, 1994).

Table 1 provides a list of general contextual factors that can be taken into consideration when exploring the process of acculturation among different groups. This framework is organized into three main contextual areas (prior immigration context, immigration context, and settlement context) and organizes key concepts that have been previously discussed in the literature (Berry, 1997; Berry & Kim, 1988; Berry & Sam, 1996; Drachman, 1992; Hardwood, 1994; Hovey & King, 1997). Although this list is not exhaustive and has been incorporated from factors identified in the literature, it provides a preliminary organizational framework that can help clarify key issues that influence the acculturation experience of different groups (e.g., immigrants, indigenous, sojourners).

Prior immigration context must be considered when studying how individuals adapt to a new culture. The political, economic, and social contexts of the country from which individuals immigrated are important determinants that influence how individuals left and how they are going to adapt in a new society. Moreover, individual factors related to the disposition to move, involvement in this crucial decision, as well as prior contact with the new society will determine the trajectory that the individual will take in acculturating to a new society. The immigration experience, as well as the arrival process, holds a vast amount of information related to the intensity of the move. For instance, traumatic experiences in refugee camps or in the attempt to enter a country illegally need to be carefully assessed to understand how these experiences influence the acculturation process of these individuals. Settlement factors at both the social and individual level are also important issues that need to be considered when studying acculturation experiences. Immigration policies as well as the society of settlement's attitudes toward immigration influence the reception of immigrants in the host country. Immigrants' changes in demographic factors such as occupation, educational attainment, and socioeconomic status (SES), among others, as well as the accomplishments or failures in the country of settlement, can have profound effects on how the individual adapts to the new culture.

Table 1. Framework of Contextual Factors Influencing Acculturation^a

Prior immigration context
Society of origin factors
Political environment
Economic environment
Social environment
Individual factors
Demographics before immigration
Reason for immigration
Role in the immigration decision
Prior knowledge or contact with host society
Separation from social support networks
Loss of significant others
Immigration context
Type of immigration group
Route of immigration
Level of danger in the immigration journey
Duration of immigration journey
Settlement context
Society of settlement factors
Political environment
Economic environment
Social environment
Immigration policies
Societal attitudes toward immigrants
Individual factors
Demographics during and after settlement
Age at time of settlement
Legal and residency status
Cultural distance between culture of origin and culture of settlement
Time in the new culture
Expectations for life in the new culture

a. Derived from Berry (1997), Berry and Kim (1988), Berry and Sam (1996), Drachman (1992), Hardwood (1994), Hovey and King (1997).

The basic assumption of this framework is that to understand the acculturation experience of individuals, one must inquire about the context in which the acculturation process takes place. The factors presented here are intended to be used as a blueprint for studying how societal and individual factors, at each level of the immigration process, influence acculturation. The use of these factors should be adapted to the particular experiences of the acculturating groups being studied. Attention to these contextual factors can facilitate a deeper understanding of how individuals adapt to a new cultural environment. This framework aims to provide researchers with possible

parameters for specifying the principal issues involved in the acculturation process with the intentions of modifying existing theories or creating new ones. In all, the definitions and the different factors that are believed to be involved in the acculturation experience have provided the foundations on which acculturation theories are built.

From Theory to Measure: Unidimensional and Bidimensional Models

The driving mechanism of acculturation research is basically a search to understand what happens to individuals who have developed in one cultural context when they try to adapt and live in a new cultural environment (Berry, 1998). How individuals adapt to this environmental change is the principal aim of acculturation theories. Two theoretical perspectives have dominated the explanation of this complex process.

Unidimensional Models

Proponents of the unidimensional models (e.g., Gordon, 1995) stipulate that the acculturation process can be conceptualized as movements along a single continuum, ranging from the immersion in one's culture of origin to the immersion in the dominant or host culture. Both of these processes, adherence to the culture of origin and immersion in the dominant culture, are considered to be part of the same phenomenon. This process is considered to affect only the acculturating group. In other words, this unidimensional process assumes that the culture of the acculturating group has no influence on modifying the dominant culture. This theoretical perspective also assumes that the acculturation process is a zero-sum phenomenon (Cortés, 1994; Cuéllar et al., 1995; Marín & Gamba, 1996; Rogler et al., 1991). In other words, the nature of the acculturation process involves a loss in one cultural domain as the individual moves toward another cultural domain (Marín & Gamba, 1996; Rogler et al., 1991). More specifically, as individuals move toward the dominant culture, they lose aspects of their original culture.

Measures using the unidimensional model (e.g., Acculturation Rating Scale for Mexican Americans; Short Acculturation Scale for Hispanics) have tended to rely on several behavioral, cognitive, and attitudinal domains related to acculturation to determine where individuals fall along this theoretical continuum. Items tapping into language acquisition, language usage, frequency of participating in cultural practices, interpersonal relationships, cultural identity, family beliefs, and adherence to traditional values, among others, are used to derive an acculturation measure (Burman, Telles, Karno,

Hough, & Escobar, 1987; Cuéllar et al., 1980, 1995; Magaña et al., 1996; Marín, Sabogal, Marín, Otero-Sabogal, & Perez-Stable, 1987; Negy & Woods, 1992).

Other researchers have relied on proxy variables such as generational status, age at immigration, proportion of life spent in the United States, years lived in the new country, place of birth, and place of education to measure acculturation (Cortés, 1994; Negy & Woods, 1992; Ryder et al., 2000). These proxy measures assumed that acculturation can be inferred from the amount of exposure individuals have to the dominant culture (Negy & Woods, 1992; Ryder et al., 2000).

The most noted limitation associated with the unidimensional model is that it confounds the adherence to the dominant culture with the maintenance of the culture of origin (Cortés, 1994; Cuéllar et al., 1995; Marín & Gamba, 1996; Rogler et al., 1991). Instruments based on this model fail to capture how individuals balance both of these cultural domains as they go through the process of acculturation. For instance, the Acculturation Rating Scale for Mexican Americans (ARMSA) (Cuéllar et al., 1980), one of the most widely used acculturation scales used for Mexican Americans (Zane & Mak, 2003), imposes a one-dimensional model by asking respondents to rate different cultural domains (e.g., language, food, music, and TV viewing preferences, spoken language, identity) along a single continuum ranging from Mexican/Spanish to Anglo/English. This single continuum forces individuals to make a choice between the two cultures (Mexican/Anglo). Although the midpoint of this continuum can produce a bicultural/bilingual measure, it still fails to provide independent measures of individuals' maintenance of their culture of origin and adherence to their dominant culture. Furthermore, placing acculturating individuals along a single continuum creates the false assumption that for individuals to acculturate, they need to have a reduction in one of their cultural domains (Cuéllar et al., 1995).

The unidimensional model restricts individuals to carry only one piece of cultural luggage. As individuals move toward the dominant culture, they are forced to throw away aspects of their culture of origin to make room for the acquisition of new cultural values, attitudes, and behaviors. This zero-sum assumption leaves no room for the existence of two cultures within an individual and provides an incomplete and fragmented measure of this complex cultural process.

Bidimensional Model

From the identification of these inherent limitations, researchers have postulated a bidimensional model of acculturation. The main component of

this theoretical perspective is that acculturation entails two independent dimensions: maintenance of the culture of origin and adherence to the dominant or host culture (Berry, 1997, 1998; Berry & Sam, 1996; Cuéllar et al., 1995; Marín & Gamba, 1996). Cultural maintenance is conceptualized as the extent to which individuals value and adhere to their culture of origin (Berry, 1997, 1998; Berry & Sam, 1996). Central to this construct is the strength with which individuals value the maintenance of their cultural identity and characteristics inherent in their culture of origin (Berry & Sam, 1996). This dimension theoretically ranges from strong adherence to the culture of origin to the total neglect or opposition to maintaining this culture. Adherence to the dominant or host culture implies the level of contact and participation that the individual has with the dominant culture (Berry, 1997, 1998; Berry & Sam, 1996). This second dimension intends to capture the level to which individuals become involved and value the culture of the host country (Berry & Sam, 1996). This dimension theoretically ranges from full participation to complete rejection of the dominant culture's values, attitudes, and behaviors.

These two dimensions measured separately create a unique theoretical framework that permits individuals to carry two pieces of cultural luggage at the same time. The underlying assumption is that these two pieces provide individuals with the option of maintaining or neglecting their culture of origin while participating and acquiring values, attitudes, and behaviors related to the dominant culture. Measures constructed from this theoretical perspective are thought to capture more of the realities and challenges inherent in the acculturation process (Berry & Sam, 1996; Rogler et al., 1991). The provision of these two independent dimensions facilitate the measurement of the processes that take place when individuals come into direct and continuous contact with a different culture as well as the changes that take place when individuals try to balance both their own cultural identity and the acquisition of new values, attitudes, and behaviors.

The bidimensional model, as conceptualized by Berry and Sam (1996), provides a simple theoretical framework that organizes the processes of acculturation across these two main dimensions. This framework identifies four distinct acculturation strategies (assimilation, separation, integration, and marginalization) that are helpful in understanding how individuals adapt to a new culture. These four acculturation strategies are identified by where individuals fall within the two dimensions of the model.

Based on Berry and colleagues' acculturation model (Berry, 1997; Berry & Sam, 1996), the assimilation strategy is characterized by individuals who do not wish to maintain their cultural identity and seek a high level of interaction and participation in the dominant culture. Separation, on the other hand, is identified by the pattern of acculturation in which individuals retain and

have a strong orientation toward their culture of origin while rejecting and avoiding interaction with the dominant culture. Integration strategies, according to this model, are characterized by individuals who embrace and value both their culture of origin as well as the dominant culture. In other words, the individual must score high in both dimensions. Last, marginalization entails those individuals who are both excluded (either voluntarily or by force) from their culture of origin as well as from the dominant culture.

These four underlying strategies are based on the assumption that individuals are free to choose their own acculturation patterns (Berry, 1997, 1998; Berry & Sam, 1996). This notion of free choice can be challenged by the fact that in some societies, acculturating groups may be forced or discouraged from acquiring and interacting with the dominant culture. History provides us with numerous examples of these cultural and social patterns: the apartheid movement in South Africa, the Holocaust, and the Jim Crow laws of the United States, among many other historical incidents of racial and ethnic conflicts. Acculturating individuals, as we have seen before, are subject to numerous contextual factors that influence the trajectory of their adaptation to a new society. To overcome this limitation, social patterns and contextual factors need to be carefully considered in the measurement process. Acculturation measures need to include direct measures of contextual factors (see Table 1) that influence acculturation. These factors need to be incorporated as components of acculturation measures and included in surveys and/or instruments that are measuring these complex phenomena. The inclusion of the context in which the acculturation occurs grounds the study of these phenomena in the everyday struggles and challenges that individuals experience and can provide a richer understanding of the components that influence this adaptation process.

Another limitation of the bidimensional model that is also observed in the unidimensional model is that the dynamic nature of the acculturation process can be lost when this theory is translated into a measurement instrument and/or applied in cross-sectional research designs. Acculturation and its strategies can be viewed as a developmental process that varies through time (Berry, 1997, 1998; Schönflug, 1997). For instance, individuals entering the acculturation process early in life, such as in childhood or adolescence, may embrace the dominant cultural values and behaviors as a way of fitting in and reject some aspects of their culture of origin. These same individuals may, later in life, embrace their culture of origin and integrate these two cultural orientations. Measurements and research designs that fail to include this developmental possibility may miss an important component of the acculturation experience. Moreover, acculturation levels may be different in private

and public contexts (Berry, 1997). Publicly, an individual may express a certain acculturation level such as integration or assimilation, but that same individual in his or her private space may embrace more separatist attitudes or behaviors. The influences of time and context are crucial components that need to be taken into consideration when studying and measuring the process of acculturation. Longitudinal studies that track how acculturation fluctuates through time are needed to better understand the developmental processes that influence individuals' acculturation experiences. Ethnographic studies that provide in-depth narratives of how individuals adapt to a new cultural environment can also produce valuable information about how the interplay between time and context influence acculturation.

Exploring Bidimensional Measures for Hispanics: Strengths and Limitations

Advantages and limitations of bidimensional measures are illustrated by exploring two promising acculturation rating scales developed for Hispanic groups in the United States: BAS and ARSMA-II. Both of these measures were developed to correct some of the problems inherent in unidimensional measures. Measure descriptions and psychometric properties for the BAS can be found in Marín and Gamba (1996) and for the ARMSA-II in Cuéllar et al. (1995).

Both of these scales correct the zero-sum assumption inherent in unidimensional acculturation scales by producing independent measures for the maintenance of the culture of origin and the adherence to the dominant culture. This allows respondents to evaluate their involvement in both cultures independently and produce a better understanding of how individuals balance both cultures across different domains (e.g., language use, food and music preference, attitudes toward both cultures). Both measures use a mirror technique in which the two dimensions of interest are measured using the same type of sentence structure and wording. For instance, in the ARSMA-II, acceptance of behaviors across both cultures is measured by "I have difficulty accepting some behaviors exhibited by Anglos" (Anglo domain), and in the Mexican domain uses similar wording and sentence structure ("I have difficulty accepting some behaviors exhibited by Mexicans"). This procedure seems to be a reliable and valid technique for creating bidimensional measures.

Although these scales provide good acculturation measures, several limitations are noted. For instance, the most serious concern, and one that has plagued the development of acculturation measures for Hispanics, is that the BAS relies only on language-based items to derive an acculturation score

(Marín & Gamba, 1996). This limitation hinders the ability of the BAS to capture acculturation processes across different domains such as changes in attitudes and values (e.g., attitudes toward gender roles) and maintenance of traditions and customs, among others. Several authors have indicated that acculturation measures that rely only on language-based items provide, at best, an indirect measure of this cultural process (Betancourt & Lopez, 1995; Lopez, 1994; Rogler et al., 1991). In this regard, ARSMA-II provides a stronger measure of acculturation than the BAS by including different cultural domains inherent in the acculturation experience and not relying solely on language-based items to capture acculturation processes.

The BAS is also plagued with other measurement problems. For instance, the wording used in the linguistic proficiency subscale items may produce an unintended response bias. The repetition of the phrase “how well” (in Spanish, *que tan bien*) throughout these items may skew the respondents’ answers toward answering positively to these questions. Moreover, this response bias can also be triggered by using the same wording from the questions in the rating scale (e.g., “well,” “very well”; in Spanish, *no muy bien, bien, muy bien*). Alternative wording of these items can be used to correct this possible bias. Instead of starting each question in this subscale with “how well,” these items can be reframed by directly asking respondents to rate their linguistic proficiency skills (e.g., “How would you rate your English speaking skills?”—very well, well, poor, very poor; or, in Spanish, *Como considera usted que habla ingles?—muy bien, bien, no muy bien, muy mal*). Future studies can compare the scores and response patterns of individuals presented with both the original and alternative wording of these items.

Another limitation of these bidimensional measures is their scaling systems. For instance, the BAS uses two 4-point rating scales that may skew the distribution of the data obtained and restrict the full range of the phenomenon being measured. The absence of middle points in these scales forces respondents to choose in either a positive or negative direction. Expanding the rating scale (e.g., to a 5- or 7-point scale) may correct for this skewness by increasing the range of choices. For instance, a simple solution to this problem would be to list an additional choice that measures either the complete presence or absence of the phenomenon being asked. For example, in the rating-scale measuring frequency (e.g., almost always, often, sometimes, almost never), an additional choice could be added at either end of the continuum to measure the absolutes of these frequencies (e.g., all the time or never; *todo el tiempo o nunca*). The expansion of the rating scale must be constructed with caution, and each response must be mutually exclusive as well as make intuitive sense to respondents. Another solution would be to include a “no opin-

ion” or “don’t know” choice to the rating scale. Because these choices do not measure the frequency or proficiency, they would not be included in the summation of the scores.

An alternative solution to produce a more continuous measure of acculturation for both the BAS and ARSMA-II, and one that could tap into the full range of these measures, would be to transform items into a phrase-completion format. This method provides a viable solution for correcting the multidimensionality problem inherent in Likert-type scales, decreases the level of cognitive complexity of items, produces responses of greater validity, produces data that approximates interval-level data, and provides a better mechanism for capturing the full range of the phenomenon being measured (Hodge & Gillespie, in press). Examples of phrase-completion modifications to BAS and ARSMA-II items are presented in the appendix. The ARSMA-II items seemed to adapt to this format better than the BAS because the items use personalized (e.g., “My family cooks Mexican foods”) and “I” statements (e.g., “I like to identify myself as a Mexican American”). The phrase-completion method also provides an avenue to expand the repertoire of items to measure more domains of acculturation such as practice of traditional customs, attitudes toward the maintenance or neglect of the culture of origin, and attitudes toward the dominant culture, among others. Experimenting and testing new measuring techniques can help improve not only the reliability and validity of acculturation measures but also expand our understanding of the acculturation process.

Further tests are also needed to expand the generalizability of the BAS and ARSMA-II across Hispanic groups (e.g., Cubans, Puerto Ricans, South and Central Americans). The major limitation of the ARSMA-II is that it restricts its utility only for Mexican Americans. Future work is needed to test whether modifications to the ARSMA-II can be implemented to make this instrument applicable with other Hispanic groups. This can easily be accomplished by replacing the “Mexican” or “Mexican American” word with instructions to use respondent’s Hispanic group (e.g., Puerto Rican, Dominican, Colombian). Other acculturation scales (both unidimensional and bidimensional) need to be compared with the BAS and ARMSA-II to further examine the concurrent validity of these measures. Because both of these measures are based on a bidimensional model, concurrent validity tests can also include a simple indicator that measures a person’s level of adherence to their culture of origin and the level of contact with the dominant culture independently. Moreover, studies examining the relationship between these two acculturation scales and other outcomes such as physical health, mental health, participation in the workforce, and educational attainment are needed to further test

the validity of this measure and expand the knowledge base of how a bidimensional measure interacts with other constructs.

With the creation of the BAS and ARSMA-II, Marín and Gamba (1996) and Cuéllar et al. (1995) have provided future researchers the foundations to begin improving and testing bidimensional measures not only for Hispanics but also for other acculturating groups in the United States and worldwide. Although scales and other measures used in the social sciences are not perfect and only provide us with an approximation of reality, they are extremely useful for organizing and learning how social and cultural phenomena influence the trajectory of our lives. Moving away from the unidimensional model of acculturation provides us with the opportunity to study how individuals balance and incorporate components of different cultures in their everyday lives.

Improving Acculturation Measures: Where We Need to Go

The principal aim of acculturation measures is to capture how individuals are adapting to a new cultural context. Expanding the scope of factors that are represented in current acculturation measures can provide a better picture of what particular areas of a person's life change when living in a new culture. Future developments in acculturation measures need to include a more diverse field of questions that capture the entire range of cultural experiences and practices inherent in the acculturation process of different Hispanic groups in the United States. Four major recommendations are made to move this field of research forward and improve the measures of acculturation.

First, we need to move beyond the use of proxy measures. Relying on a person's age at immigration, time spent in the United States, language spoken at home, place of birth, and generational status as measures of acculturation provides indirect indicators of this complex cultural phenomenon. These types of measures capture incomplete pieces of the experience inherent in the acculturation process. Research findings based on these types of measures provide a fragmented and often confusing picture of how acculturation affects individuals trying to adapt to a new environment.

Literature reviews that have examined the relationship between acculturation and the mental health status of Hispanic groups in the United States, as well as adaptation outcomes, have found a plethora of inconsistent and inconclusive findings (Cortés, 1994; De la Rosa, Vega, & Radisch, 2000; Moyerman & Forman, 1992; Negy & Woods, 1992; Rogler et al., 1991). Although some of these inconsistencies can be attributed to research designs, methods, and types of samples used, the use of proxy measures has also con-

tributed to these findings. Proxy measures inform us about a possible relationship between acculturation and some other outcomes, such as prevalence of mental illnesses, use of medical or social services, and health outcomes, but provide us with little information about how and why these relationships are formed. For instance, large epidemiological studies that have examined the relationship between mental illness and acculturation among Hispanic groups have found an inverse relationship between these constructs (Burman, Hough, Karno, Escobar, & Telles, 1987; Ortega, Rosenheck, Alegria, & Desai, 2000; Wells, Golding, Hough, Burman, & Karno, 1989). Although these studies indicate that acculturation may play an intrinsic role in the expression of mental illnesses, the use of proxy measures hinders their ability to explain what aspects of the acculturation experience (e.g., acquisition of a new language and/or value system, retention of traditional values, changes in attitudes toward mental illness) influence the appearance of these disorders. Unless we move beyond these proxy measures, we are not going to understand how the process of acculturation influences a person's adaptation. Proxy measures do not capture the intricacies of the acculturation experience and provide an incomplete understanding of this process. Proxy measures need to be supplemented with contextual factors and other measures (e.g., qualitative accounts) of how a person adapts to a new cultural environment.

The second recommendation calls for an improvement in the operationalization of acculturation indicators. Following the recommendations by Betancourt and Lopez (1995) and Lopez (1994), we need to move toward more basic measures of cultural change. Measures of acculturation need to go beyond language-based indicators and include more basic cultural change measures that tap into basic attitudes, beliefs, and behaviors (Cuéllar et al., 1995). The creation of basic acculturation indicators must be built on psychometric principles to produce reliable and valid measures. Acculturation scales for Hispanics (e.g., BAS, ARSMA, ARSMA-II) that have struggled with the incorporation of value and attitude indicators provide future researchers with the foundations to begin developing these new measures. Integration of the cross-cultural psychological literature that has looked into core cultural values such as collectivism, individualism, sociocentrism, and allocentrism can serve as a starting point for the development of these values and attitude measures related to cultural change.

A preliminary step would be to study how these cultural values and attitudes relate to current acculturation measures. For instance, studies can examine how values (such as collectivism) change with levels of acculturation in Hispanics. These types of studies can begin to test hypotheses related to how moving from one type of culture to another (e.g., from a collectivistic to an individualistic culture) influences a person's cultural orientation as well

as how a person fuses these two types of cultural values. Improvements in this area can provide us with a better understanding of how individuals balance different dimensions of culture into their everyday lives.

The third recommendation calls for the incorporation of theory into the process of acculturation. Berry's (1997, 1998) acculturation model provides an example of how to place the acculturation process within an existing theoretical framework. This model views the acculturation experience through the lens of a stress-coping mechanism. Building on Lazarus and Folkman's (1984) work, Berry's model considers the acculturation experience as a stress-coping phenomenon. According to this perspective, the acculturation process entails the learning of new behaviors, attitudes, and values that the individual needs to incorporate into his or her everyday existence to function in a new environment (Berry, 1997). This learning process can produce certain levels of stress that the individual needs to resolve and adapt to. How the individual copes with these stressors is theorized to determine how the individual adapts. Negative coping mechanisms are thought to lead to negative outcomes such as depression, anxiety, and substance abuse, among others (Berry, 1997; Berry & Sam, 1996).

The incorporation of this type of theoretical framework into the study of acculturation raises interesting questions. This framework opens the door to explore not only the process of acculturation but also the learning and coping processes related to these cultural experiences. It provides theoretical parameters to examine the stress that arises from the integration of cultural values, attitudes, and behaviors and how individuals cope with these stresses. It also begins to change the focus of measures from cultural change and cultural fusion to the stress inherent in this process. Newer measures that have incorporated and operationalized this stress component, such as Cervantes, Padilla, and Salgado de Snyder's (1991) Hispanic Stress Inventory, provide interesting avenues to begin expanding this theoretical orientation. Placing acculturation within a theoretical framework will expand and organize the knowledge base of this process. Integrating literature from different fields (e.g., sociology, social work, psychology) as well as from different acculturating groups (e.g., refugees, immigrants, indigenous groups) helps bridge the gap of knowledge that currently exists in this area of study.

The last recommendation calls for the incorporation of contextual factors. These factors provide us with a fuller understanding of how individuals enter the acculturation process as well as what influences their adaptation. How can we understand how age at immigration or language spoken at home influence persons' health or mental health outcomes without exploring the context in which these persons entered the acculturation process and how they cope with cultural changes? The inclusion of contextual factors helps us identify

possible mediator and moderator factors that may hinder or aid the acculturation experience (Berry & Sam, 1996). Context also takes time into consideration and provides at least the theoretical underpinnings for exploring how time affects the trajectory of acculturation. Recent reviews regarding acculturation and changes in cultural values indicate that certain values (e.g., familism) tend to be fairly stable through time whereas others such as gender roles tend to change more rapidly (Marín & Gamba, 2003). More work is needed in this area. Changes in modes of acculturation as well as cultural orientations are linked to contextual factors. Age, sociopolitical forces, SES, and creation of new social networks can influence how the individual adapts and integrates to a new cultural milieu (Berry & Sam, 1996; Drachman, 1992; Rogler, 1994). Considering prior immigrating experiences, the immigration context and the settlement process help us understand the mechanisms and forces that affect acculturation and provide a more holistic view of this cultural experience.

These four recommendations are intended to provide a better theoretical and empirical framework for creating measures that capture the entire richness and complexity of the acculturation experience. As the United States becomes a more diverse nation and as different cultures come into continuous contact with each other, researchers and clinicians must have a better understanding of how individuals adapt to these cultural changes. Measuring and specifying the cultural components that are theorized to be affected through the acculturation process can provide a better understanding of how individuals adapt to these changes and clarify the association that acculturation has with other constructs such as mental and physical outcomes, health services use, and educational attainment. Moving away from proxy and unidimensional measures, supplementing the study of this process with contextual factors, and taking time into consideration can provide a better understanding of how individuals acculturate and adapt to new environments.

Knowledge of acculturation must be built from the ground up; that is, measures must expand their repertoire of indicators to capture basic attitudes, values, and behaviors related to the acculturation process. Individuals' experiences must be carefully studied with both quantitative and qualitative methods to better capture the changes that occur throughout this cultural process. If we want to fully understand how acculturation influences individuals, we need to produce better measures that include contextual factors that may mediate or moderate this dynamic process. Researchers and clinicians can no longer conform to using acculturation measures that use superficial indicators of this complex process such as time spent in the United States or language spoken at home. Instead, measures need to be constructed with the

intentions of capturing behaviors, cognitive processes, cultural changes, and environmental components that influence this process of adaptation. Past research provides us with multiple examples of the limitations that have plagued the measurement of this crucial concept and with the foundations to produce stronger measures. Research in this area needs to move forward by combining different methods (qualitative and quantitative techniques) to create a better knowledge base for understanding what influences this process and what aspects of the acculturation experience (e.g., cultural change, acquisition of new language, maintenance of culture of origin) influence adapting to a new cultural milieu.

APPENDIX

Examples of Phrase-Completion Modifications to BAS and ARSMA-II Items

BAS original item: How often do you think in English?

1	2	3	4
<i>Almost never</i>	<i>Sometimes</i>	<i>Often</i>	<i>Almost always</i>

Modification: I often think in English.

0	1	2	3	4	5	6	7	8	9	10
<i>Never</i>										<i>All the time</i>

BAS original item: How well do you understand radio programs in Spanish?

1	2	3	4
<i>Very poorly</i>	<i>Poorly</i>	<i>Well</i>	<i>Very well</i>

Modification: Indicate the extent to which you understand radio programs in Spanish.

0	1	2	3	4	5	6	7	8	9	10
<i>Do not understand</i>										<i>Completely understand</i>

ARSMA-II original item: I have difficulty accepting practices and customs commonly found in some Mexicans.

1	2	3	4	5
<i>Not at all</i>	<i>Very little or not very often</i>	<i>Moderately</i>	<i>Much or very often</i>	<i>Extremely or almost always</i>

Modification: I have difficulty accepting practices and customs commonly found in some Mexicans.

0	1	2	3	4	5	6	7	8	9	10	
<i>No</i>											<i>Many</i>
<i>difficulties</i>											<i>difficulties</i>

NOTE: BAS = Bidimensional Acculturation Scale for Hispanics. ARSMA-II = Acculturation Rating Scale for Mexican Americans—Revised.

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