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Conceptual considerations in studies of cultural influences on health behaviors

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Numerous studies have identified cultural influences on a variety of health behaviors (Lopez-Class et al., 2011). However, there has been considerable variation across studies in the conceptualization and measurement of cultural influences. In general, "culture" refers to a shared set of meanings and ideas held by a group of people, although the precise definition of culture has been debated for centuries (Kaufman, 2004; Kroeber & Kluckhohn, 1952). "Cultural groups" refer to groups of people who hold similar values, beliefs about acceptable behavior, and ideas about what it means to be a member of the culture. Culture is sometimes, but not always, synonymous with nations and national boundaries—and groups that are similar on one dimension of culture (e.g., groups that share a common language) are not necessarily similar on other cultural dimensions.

Researchers are often faced with decisions about which cultural influences to assess in their studies and how to measure those cultural influences. Numerous survey measures of cultural constructs exist, including measures of language usage and proficiency, behavioral acculturation to the receiving culture and to the heritage culture, biculturalism, ethnic identity, cultural values, and acculturative stress (Chakraborty & Chakraborty, 2010; Knight et al., 2009; Lopez-Class et al., 2011; Salant & Lauderdale, 2003; Thomson & Hoffman-Goetz, 2009; Wallace et al., 2010). Although these survey measures assess distinct constructs, some of them contain similar questions, and they are often intercorrelated. Therefore, it is important to make informed decisions about which scales to use. The choice of measures should be guided by theories about the operational mechanisms by which culture influences health. Researchers must ask themselves how and why they expect culture to play a role in their findings and select measures that capture the aspects of culture that are most relevant. For example, many acculturation scales are dominated by questions on language usage, but language proficiency and preference may or may not be relevant to the health behavior in question. Language proficiency is definitely relevant in many health behavior studies because language constrains the extent to which people can access health information, communicate their health problems and questions to healthcare providers, understand health instructions, and participate in interventions. However, language may not be relevant to other aspects of culture that affect health, such as food preferences and norms

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about smoking, alcohol use, or physical activity. Measures of language usage may serve as proxies for other cultural phenomena that also influence behavior (Kang, 2006).

Schwartz and Unger (2010) provide a conceptual model of acculturation that can help researchers to deconstruct the complex constructs of culture and acculturation and to decide which aspects are most relevant to their research questions. Consistent with Berry (1980) seminal work, this framework describes the individual's orientation toward the heritage culture and orientation toward the receiving culture as two separate dimensions. Acculturation to the receiving culture does not necessarily imply a loss or rejection of the heritage culture; people can identify with aspects of both cultures simultaneously (i.e., biculturalism; Schwartz & Unger, 2010). The model also emphasizes the importance of measuring cultural practices, values, and identifications separately. These phenomena may evolve at different rates; an immigrant can learn a new language and begin practicing new cultural behaviors without fully embracing the deeper core values of the new culture or identifying as a member of that culture. If cultural practices, values, and identifications each potentially exert unique influences on the behavior in question, they should be measured as separate constructs.

We recommend that researchers assess these three domains of acculturation (cultural practices, values, and identifications) separately, and assess each domain separately for the heritage and receiving cultural dimensions. Measures of language usage and proficiency are straightforward (e.g., Marin & Gamba, 1996), but ecologically valid measurement of other practices, values, and identifications can be more complex. Some studies have focused on one specific culture to describe that culture's values (e.g., familism in Hispanic cultures Cuéllar et al., 1995; Knight et al., 2010 and filial piety in Asian cultures Ho, 1994). Other researchers and theorists have delineated broader values that characterize most cultures to some degree and have measured those values cross-culturally. For example, Hofstede (2001) described five “universal” dimensions that vary across cultures: individualism–collectivism, uncertainty avoidance, power distance, long-term/short-term orientation, and masculinity/femininity. These values can be aggregated to the national level to conduct cross-cultural comparisons, or they can be studied at the individual level to examine inter-individual variation in values within a culture (Matsumoto, 2003).

Supporting the notion of universal values, several studies have administered measures of culture-specific values to ethnically diverse samples and have concluded that most values are present across cultures (Schwartz et al., 2010a, b; Unger et al., 2006). For example, multiple cultures include values about the importance of the family or larger social group versus the individual (individualism–collectivism, familism), respect for elders and authority figures (respeto, filial piety), harmonious interpersonal relations (simpatía, saving face), and gender role equality or differentiation (machismo and marianismo; Hofstede, 2001). Depending on the goals of the research, researchers may decide to use scales that were developed within and tailored to one specific culture (e.g., scales of familism, respeto, saving face), or scales reflecting more broadly-defined values (e.g., individualism/collectivism).

The importance of the cultural context

Behavior is influenced not only by an individual's cultural characteristics, but also by the surrounding cultural environments (Trickett, 2009). When measuring cultural influences on behavior, researchers should also measure the cultural context of the neighborhood, school, workplace, or general geographical area. This may include the demographic characteristics of the surrounding population, including race, ethnicity, and immigration status, and also shared social norms and values that are either welcoming or hostile to immigrants and

minorities. The cultural context exists at multiple ecological levels of analysis (e.g., micro-level contexts such as the family, meso-level contexts such as neighborhoods, and macro-level contexts such as the political climate) and is a combination of objective realities and individuals' perceptions (Bronfenbrenner, 1979). Operationalizations of the cultural context may include individuals' self-reports about the cultural context, census data on neighborhood composition, analyses of local policies that affect immigrants and minorities, analyses of the history of intergroup relations, and data on the quality of education, employment, and housing experienced by various groups (Trickett, 2009). A useful strategy is to geocode participants' home addresses to link their self-reports with objective indicators found in national data sets that also contain geocodes, including the U.S. Census data as well as data sets on home prices, criminal arrests, election results, and ratings of local schools. In contexts where multiple cultural contexts intersect, both should be measured. For example, in communities with large immigrant populations, both the heritage and receiving cultural streams can exert strong influences and should be modeled (e.g., Schwartz et al., 2011). Alternatively, the extent to which individuals are able to integrate their heritage and receiving cultures into an individualized cultural mosaic (i.e., bicultural identity integration; Chen et al., 2008) might be used as a predictor of health outcomes.

Moving beyond two cultures

Most models of cultural influences focus on two cultures: the heritage culture and the receiving culture (Berry, 2005). In the modern world, international travel and global media have made nearly all cultures multicultural to some degree. An immigrant to the United States will find not a homogeneous “U.S. White culture,” but rather a complex mixture of people, customs, and belief systems from numerous cultures (Alba & Nee, 2006). Similarly, even before arriving in the United States, the immigrant is likely to have been exposed to aspects of other cultures through the media (Chopra and Gajjala, 2011). When an immigrant with exposure to multiple cultures moves to a new country that is composed of elements of multiple cultures, numerous combinations of cultural orientations can result (Flannery et al., 2001). Furthermore, groups of immigrants can create new cultures that differ from both the heritage culture and the receiving culture (Roosens, 1989). Of course, the practical realities of survey research prevent researchers from measuring every possible combination of cultural influences. The field needs innovative ways to operationalize complex cultural influences without over-simplifying or over-complicating.

Moving beyond one timepoint

Acculturation and cultural identity formation are dynamic processes (Chun et al., 2003). Acculturation evolves over the lifespan through interactions with family, peers, and larger social contexts such as schools, neighborhoods and workplaces. Cultural identity formation is a developmental process that typically occurs during adolescence and early adulthood but can continue throughout adulthood (Phinney, 1990). However, most studies have measured these constructs at a single timepoint. More research is needed that assesses long-term changes in these constructs over the life course. Individuals' subjective perceptions of their acculturation and cultural identity change from one situation to another, depending on the social and cultural context (Hong and Mallorie, 2004). Bicultural individuals might feel most *integrated* into the heritage culture when they are in social contexts associated with that culture (e.g., with family, celebrating cultural traditions). Conversely, people may *identify* strongly with their heritage cultures in situations where they represent a significant minority (reactive ethnicity). However, few studies have assessed moment-to-moment changes in acculturation and cultural identity (Yip, 2009). Technologies such as Ecological Momentary Assessment (Shiffman et al., 2008), in which individuals are prompted to answer brief

surveys many times throughout the day, may be useful to capture these short-term fluctuations and assess their associations with health-related behaviors.

Cultural influences on health behaviors and outcomes are complex. Advancing our understanding of these processes depends on comprehensive and valid understanding and measurement of cultural dimensions and their interactions across levels of analysis (micro to macro). Improved conceptualization of cultural influences on health could lead to the development of more effective and culturally relevant health education and promotion programs.

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