Thanh V. Tran

Developing Cross-Cultural Measurement

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Preface

The United States historically has been a haven for immigrants and refugees from almost every corner of the globe. As the result, social workers have played a major role in helping the newcomers settle and adjust into their newly found communities. Cross-cultural issues are not new among those of us who are trained or identify ourselves as social workers. The profession of social work has a long tradition of advocating and serving clients from different cultural backgrounds (Lubove, 1965; Green, 1982). The question that remains to be answered is to what extent social workers are concerned about the impact of cultural differences in the implementation of services and the assessment of service outcomes across different social, economic, racial, and national groups. This small guide attempts to articulate the process of cross-cultural research instrument development in social work research and evaluation.

People migrate from place to place for different reasons, including the economy, political turmoil, religious persecution, war, and calamity. Immigration researchers often classify migration into two groups: the pulled and the pushed immigrants. Pulled immigrants migrate out of their country of origin by choice, and pushed immigrants migrate because of factors beyond their control. In addition, modern transportation technologies and the global economy have opened the borders of nations and continents, allowing more people to easily migrate across continents and nations. As reported by the United Nations, in 2002 there

were approximately 175 million people living outside of the country of their birth. By the end of the twentieth century, with the explosion of information science and technology, people around the globe have been exposed to other cultures and are able to virtually and instantaneously connect with foreigners and strangers from every corner of the earth.

Changes in the U.S. immigration laws from 1965 to 1990 created opportunities for immigrants from diverse ethic/racial backgrounds to arrive in this country. In 1970, there were 10 million foreign-born individuals; this number increased to 14 million in 1980, 20 million in 1990, and by March 2000, the foreign-born population in the United States increased to 28 million (U.S. Census Bureau, 2000). Data from the 2000 U.S. Census also revealed that approximately 45 million (about 18%) people ages 5 years and older living the United States spoke a language other than English at home. More specifically, 10.5 million (about 23%) of these 45 million people either spoke no English or very little English (Li, McCardle, Clark, Kinsella & Berch, 2001). Indeed, the U.S. Census data also revealed that there were 11.9 million individuals considered "linguistically isolated," (Shin & Bruno, 2003). With demographic changes and the reality of cultural diversity in the United States and other parts of the world today, social work researchers are increasingly aware of the need to conduct cross-cultural research and evaluation, whether for hypothesis testing or outcome evaluation.

This book's aims are twofold: to provide an overview of issues and techniques relevant to the development of cross-cultural measures and to provide readers with a step-by-step approach to the assessment of cross-cultural equivalence of measurement properties. There is no discussion of statistical theory and principles underlying the statistical techniques presented in this book. The book draws information from existing cross-cultural research in the social sciences, public domain secondary data, and primary data from the author's research.

Chapter 1 provides the readers an overview of the definitions of culture, a brief discussion of cross-cultural research backgrounds in anthropology, psychology, sociology, and political Science, and the influences of these fields on social work.

Chapter 2 describes the process of cross-cultural instrument development from formulating the research aims to the assessment of cross-cultural measurement properties.

Chapter 3 discusses the preliminary tasks of a cross-cultural instrument development process. The chapter offers guides and recommendations for building a research support team for various critical tasks.

Chapter 4 addresses the issues of adopting and adapting existing research instruments. The processes and issues of cross-cultural translation and assessment are presented and discussed in detail.

Chapter 5 is devoted to the process of developing new instruments. This chapter begins with a discussion of the foundation of measurement theories and the entire process of instrument development from the definitions of abstract concepts, the construction of observed indicators, and assessment of the validity and reliability of the new instruments.

Chapter 6 focuses on the analytical techniques to evaluate cross-cultural measurement equivalence. The chapter demonstrates the applications of item distribution analysis, internal consistency analysis, and exploratory factor analysis.

Chapter 7 explains and illustrates the application of confirmatory factor analysis and multisample confirmatory factor analysis to evaluate the factor structure and testing cross-cultural measurement invariance. Students will learn how to generate data for confirmatory factor analysis, presenting the results and explaining the statistical findings concerning measurement invariance.

Chapter 8 provides concluding remarks, makes recommendations for cross-cultural social work research, and offers some insight into the issues of treatment equivalence with respect to evidence-based social work in multicultural settings.

Although this book is prepared for social work audience in the United States, the issues of cross-cultural measurement equivalence and assessment techniques are applicable beyond any geographical locations.

Data Sources

Six data sets are used to provide examples throughout this book. The Chinese ($n = 177$), Russian ($n = 300$), and Vietnamese ($n = 339$) data were collected in the Greater Boston areas at various social service agencies and social and religious institutions. These self-administered surveys were conducted to study various aspects of health, mental health, and service utilization among these immigrant communities (Tran, Khatutsky,

Aroian, Balsam & Convey, 2000; Wu, Tran & Amjad (2004). This instrument was translated from English to Chinese, Russian, and Vietnamese by bilingual and bicultural social gerontologists, social service providers, and health and mental health professionals. The translations were also reviewed and evaluated by experts and prospective respondents to ensure cultural equivalence in the translations.

The Americans' Changing Lives Survey: Waves I, II, and III offers rich data for cross-cultural comparisons between African-Americans and Whites regarding important variables concerning physical health, psychological well-being, and cognitive functioning. This longitudinal survey contains information of 3,617 respondents ages 25 years and older in Wave I, 2,867 in Wave II, and 2,562 in Wave III (House, 2006).
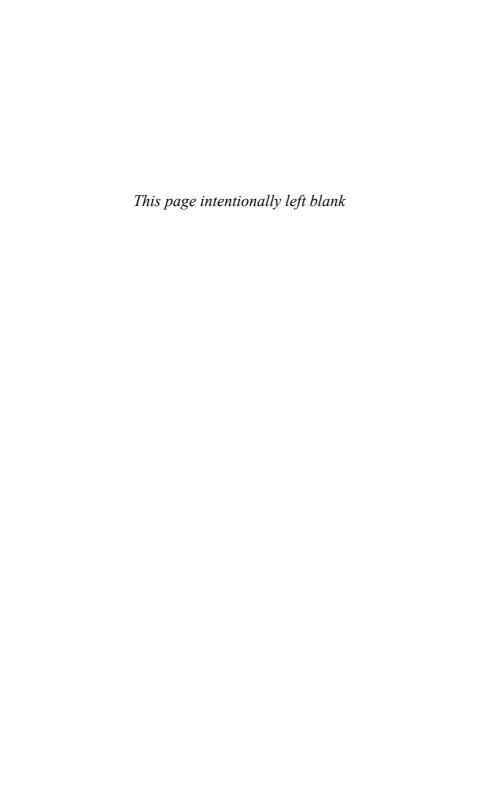
The National Survey of Japanese Elderly (NSJE), 1987 has similar research variables as those used in the Americans' Changing Lives Survey. The purpose of this survey is to provide cross-cultural analyses of aging in the United States and Japan. The 1987 NSJE Survey contains data of 2,180 respondents ages 60 years and older (Liang & Maeda, 1997).

The 1988 National Survey of Hispanic Elderly people ages 65 years and older (Davis, 1997) was conducted to investigate specific problems, including their economic, health, and social status. The telephone survey was conducted in both Spanish and English. There were 937 Mexicans, 368 Puerto Rican-Americans, 714 Cuban-Americans, and 280 other Hispanics.

These data sets are used because they provide both micro- (within-nation) and macro- (between-nation) levels of cultural comparisons. The statistical results presented throughout the book are only for illustrations. Readers should not interpret the findings beyond this purpose.

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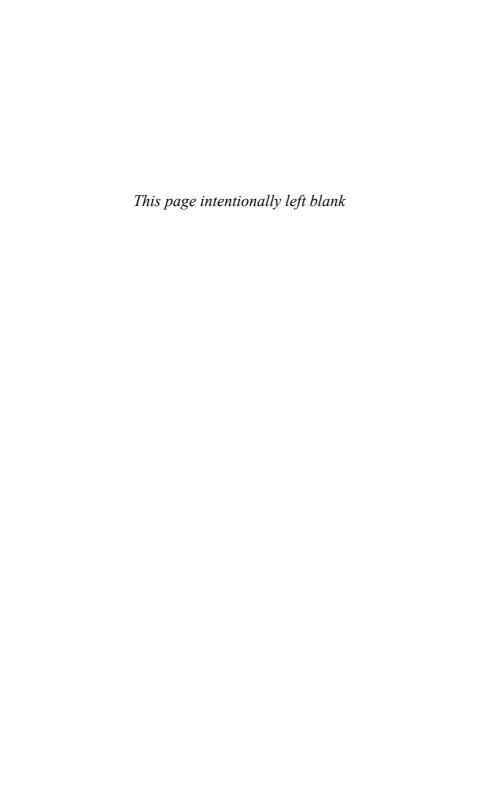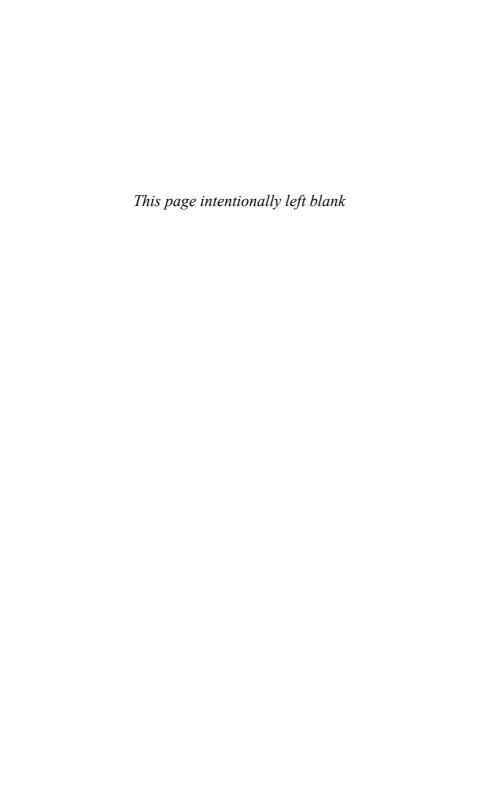
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Overview of Cross-Cultural Research

T his chapter discusses the concept of culture and reviews the basic principles of multidisciplinary cross-cultural research. The readers are introduced to cross-cultural research in anthropology, psychology, political science, and sociology. These cross-cultural research fields offer social work both theoretical and methodological resources. The readers will find that all cross-cultural research fields share the same concern—that is, the equivalence of research instruments. One cannot draw meaningful comparisons of behavioral problems, social values, or psychological status between or across different cultural groups in the absence of cross-culturally equivalent research instruments.

Definitions of Culture

Most of us are often fascinated with stories and tales from travelers who are fortunate and/or courageous to travel to unknown territories and encounter exotic cultures and people. Scholarly interests in cross-culture studies have their root in ancient Greece since the middle Ages (*see* Jahoda & Krewer, 1997; Marsella, Dubanoski, Hamada, & Morse, 2000). However, systematic studies of cultures originated from

the field of anthropology. Edward Burnet Tyler (1832–1917) has been honored as the father of anthropology, and his well-known definition of culture also has been quoted numerous times in almost every major book and paper on studies of cultures. He views culture as "complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society" (Tyler, 1871, 1958). Since Tyler's definition of culture, there have been hundreds of definitions of culture by writers and scholars from different disciplines and fields. As noted by Chao & Moon (2005), culture is considered as one of the difficult and complex terms in the English language. This is also probably true in other languages. Even the United Nations Educational, Scientific and Cultural Organization (UNESCO) seems to have a problem with its definition of culture. UNESCO defines culture as the combination of literature and the arts, people's ways of life, societal value systems, traditions, and beliefs (http://portal.unesco.org/culture/). Kluckhohn (1954) defined culture as the memory of a society.

There have also been attempts to define culture by categorizing it into different types. As suggested by Barkow, Cosmides, and Tooby (1992), there are three types of cultures: metaculture, evoked culture, and epidemiological culture. Metaculture can be viewed as what makes human species different from other species. Evoked culture refers to the ways people live under different ecological conditions, and these ecological-based living conditions lead to within- and between-cultural differences known as epidemiological culture. The conceptualization of this cultural typology suggests reciprocal relationships between psychology and biology in the development of culture and society. Wedeen (2002) suggested a useful way to conceptualize culture as semiotic practices or the processes of meaning-making. Cultural symbols are inscribed in practices among societal members, and they influence how people behave in various social situations. For example, elder care-giving may have different symbolic meanings in different cultures and how members of a specific cultural practice their care-giving behaviors may have different consequences on the quality of life of the recipients. Generally, culture can be viewed as a combination of values, norms, institutions, and artifacts. Social values are desirable behaviors, manners, and attitudes that are for all members of a group or society to follow or behave. Norms are social controls that regulate group members' behaviors.