

Cross-cultural gerontology research methods: challenges and solutions

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ABSTRACT

Cross-cultural research in the behavioural and social sciences uses data from several societies or distinct cultural groups to describe the diversity of human behaviour and test hypotheses about behaviour and culture. This paper reviews the historical development and current state of cross-cultural research in the social sciences and gerontology. Cross-cultural research in gerontology is important because the social processes of ageing vary. It aims to distinguish universal from culturally-specific processes and determine how cultural factors influence individual and population ageing. It has to overcome many challenges: how to design an equivalent and unbiased study, how to access different cultures, how to contextualise these cultures, and how to ensure that questions are meaningful for different cultures. Appropriate strategies include using an international multicultural research team, becoming familiar with the local culture, maintaining good relationships with community leaders, studying only those aspects of behaviour that are functionally equivalent while avoiding the idiosyncratic, using appropriate measures, and encouraging equal partnership and open communication among colleagues. Cross-cultural research has been growing and has become a basis for globally-relevant social gerontology. To highlight the complexity of cross-cultural research and lessons learnt from such research experience, this paper describes an example study of long-term care that involved researchers from more than 30 countries and from many disciplines.

KEY WORDS – cross-cultural, gerontology, method, ageing, international.

Background

Cross-cultural research is a specialised area of behavioural and social sciences research that uses empirical data from many societies (or cultures) to examine diversity and to test hypotheses about human behaviour and culture. It is rooted in comparing different cultures to discover generalities and truths about some, many or even all cultures. ‘As with any research strategy, cross-national research comes at a price: it is costly in time and money; it is difficult to do; it often seems to raise more interpretive

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problems than it solves' (Kohn 1987: 713). However, cross-cultural research is important because it provides opportunities to generalise across different cultures and make statements regarding the similarities and differences between cultures (Ember and Ember 2000).

The main player – culture

As the main focus of cross-cultural research is surrounding the term 'culture', so we need to first ask what is culture? Laungani (2007) stated that culture is difficult to define and understand and that it has various definitions and understandings. Culture is an evasive concept, however, and its definition can vary depending on whom you ask. Vijver and Leung (1997) discussed culture as an umbrella concept that encompasses a host of characteristics. *Culture* is shared values, concepts and beliefs, along with symbols and historically-transmitted patterns of meaning. Culture can be a common experience among a group of people, a shared language, or a symbolic or religious system. Kohn (1987) reported that culture as a concept is too global and requires a meaningful explanatory variable. Laungani explained that the word *culture* can be 'used as a mantra to explain away differences between groups of people. Thus, if any noticeable differences in attitudes, values, and behaviour are not easily understood, they are "explained away" in terms of cultural differences' (2007: 30). However, Mui and Shibusawa (2008) pointed out that even though Asian and American cultures have many similarities, differences are also apparent and critical. Even though Asian-American elders in the United States of America (USA) share similar cultural values to the majority community, they speak different languages and have different customs. Therefore, it is inappropriate to treat Asian elders as a homogeneous group and their culture can only be distinguished after contextualising the meaning of culture. These fundamental differences in the definition of *culture* make it difficult, time consuming and expensive to conduct cross-cultural research.

A history of cross-cultural research

Cross-cultural research originated in the 19th century with anthropologist Edward B. Tylor's (1889) comparative studies of the associations between marital residence and kinship and other customs such as joking and avoidance of relationships (Ember and Ember 2000). The cross-cultural comparison method was also an integral part of Tylor's study of the development of social institutions (*cf.* Berry 1997), but that study was not

successful because the cases duplicated one another and his conclusions were suspect because the sample size was unjustifiably inflated (Ember and Ember 2000: 89). Nearly 50 years later, anthropologist George Murdock revived cross-cultural research when leading the Institute of Human Relations at Yale University. Murdock completed his doctorate at Yale in the combined sociology/anthropology department called the 'Science of Society' founded by William Graham Sumner. Together with a multi-disciplinary team of professionals, Murdock developed the 'cross-cultural survey' based on the 'comparative perspective' established by Sumner. The purpose of the cross-cultural survey was to promote comparative research on humans in several areas as well as to provide explanations of human behaviour that were not necessarily 'culture bound' (Ember and Ember 2000). Cross-cultural research has gained popularity over the years, and been adopted in sociology, psychology, economics, gerontology, political science and other social sciences. It brings together multidisciplinary teams and professionals to develop, investigate and analyse different cultures and sub-cultures worldwide. Although cross-cultural research tries to answer questions and create solutions, it also, as Kohn (1987) said, has the tendency to create more questions.

Cross-cultural research

The most common assumption about cross-cultural research is that the data and results end in comparisons that indicate patterns. The methodology of cross-cultural research is rather complex. While Brislin (1976) pointed out that cross-cultural methodology is no different from other psychological research in that it emphasises reliability, validity, the representativeness of experimental tasks, and the generalisation of experimental tasks to behaviour outside the study, he also acknowledged that is more difficult than psychological research conducted in a single culture because the researcher has to deal with different languages and concepts and the variable applicability of its measures and instruments. Cross-cultural research does in fact use comparative methods. According to Ember and Ember (2000), four types of comparisons are made to varying degrees: in terms of (a) geographical scope (*i.e.* worldwide or limited to a particular geographic region), (b) sample size (*i.e.* two-case comparison, small-scale comparisons (with less than 30 cases), or larger comparisons), (c) primary data (collected by researchers in the field) or secondary data (collected by others and used by researchers), and (d) time or date (*i.e.* single period – synchronic comparison, or two or more time periods – diachronic comparison).

One kind of comparison is by place. International organisations such as the United Nations, the World Bank, and the World Health Organization (WHO) regularly publish comparative reports on socio-economic and health indicators among countries or within a geographic region. For example, the WHO reports on life expectancy worldwide and compares life expectancy by country and geographic region (Omram 2001). This type of comparison is also used to examine regional differences within large countries. For example, Liu *et al.* (2010) examined spatial variations and correlates of disability-free life expectancy among older adults in China. The second type of comparison is based on sample size. Small studies usually adopt qualitative research methods, whereas large studies tend to use quantitative methods. For example, Kleinman (1978) studied culture, illness and care from anthropological and cross-cultural perspectives using the case study method. The third type of comparison is based on the data source (primary *versus* secondary). For example, Yancik and Ries (2004) used secondary data collected from the USA and other industrial countries to compare cancer rates among older persons. The last type of comparison is over time (cross-sectional comparisons or longitudinal studies). For example, McCrae *et al.* (1999) used cross-sectional data from different countries to report age differences in personality across the adult lifespan in five cultures. There are very few cross-cultural longitudinal studies because of the high costs associated with this type of research. The most commonly used research method in cross-cultural comparisons worldwide is secondary synchronic data in anthropology (Ember and Ember 2000).

Like other research methods, cross-cultural research emphasises the reliability and validity of the findings. Many factors could lead to errors in cross-cultural research, from the earliest design decisions to the analysis and interpretation. Minimising these errors can improve the *validity* and *reliability* of the study. Ember (1994) made the following suggestions for reducing study errors: creating designs that allow for the most direct measurement; using variables that are highly visible, reported often, and easily located from the literature; focusing on a specific time and place (for all measures for a given sample case); and paying attention to the quality or properties and of a particular variable or measure. The following sections elaborate on some of these methodological challenges and recommendations.

Cross-cultural research in gerontology

Cross-cultural research is useful for studying any phenomenon affected by cultural factors such as personal and population ageing. Since the early

1980s, an increasing number of published gerontology papers have used either comparative perspectives or cross-cultural methods. The *Journal of Cross-cultural Gerontology* in particular promotes this type of research. The purpose of cross-cultural gerontology research is to separate out universal processes of ageing from culture-specific processes and to understand how culture influences ageing (Palmore 1983). Cross-cultural gerontology is identified with four important areas: (a) anthropological inquiry, which explores how human experience is shaped by culture; (b) ethnogerontology, which aims to further understanding of the relationship between ethnicity and ageing; (c) minority gerontology, which focuses on issues of ageing among minorities; and (d) geographical investigations, which examine migration in later life (Torres 2003). These themes were prominent among early contributions to cross-cultural gerontology research.

Cross-cultural gerontology research uses three common research methods: comparative descriptive, comparative process, and comparative outcome (Jackson 2002). *Comparative descriptive research* describes similarities and differences in ageing across large populations either within or across national boundaries. For instance, Chi (2004) described the similarities and differences in long-term-care policy and in the profiles of nursing home residents in five countries. *Comparative process research* describes how the ageing process might be influenced by national origin, culture, acculturative factors and race/ethnicity. For instance, Leung, Chi and Lui (2006) explored the influence of culture on older adults' learning experience in Western and Eastern countries. *Comparative outcome research* examines whether the nature of some relationships is similar across national and cultural boundaries. For instance, Berkanovic, Kitano and Chi (1995) examined the factors that determine the physical, mental and social health levels of older Chinese people in Beijing, Shanghai, Guangzhou and Los Angeles. Little research has focused on methodology in cross-cultural gerontology research although most cross-cultural gerontology reports include short accounts of the methodological challenges that were encountered. Among the few papers specifically on methodology, Torres (1999) reported that the primary concern for cross-cultural gerontology researchers is to define the socio-cultural settings that shape the experience of ageing.

Challenges of cross-cultural gerontology research

There are various challenges when conducting cross-cultural research, but here I focus on the particular difficulties in gerontological investigations. They include how to design an equivalent and unbiased study, how to

access different cultures, how to ensure that questions are meaningful for different cultures, and how to contextualise cultures. These challenges will be prominent among the factors that impede the further development of cross-cultural gerontology research, but researchers are aware of the issues and have been striving for solutions – as discussed later in the paper.

A common issue in cross-cultural research is designing an *equivalent and unbiased study*. In cross-cultural gerontology research, bias is inevitable, because researchers' own values and ethics colour the analysis despite their efforts to maintain independence and objectivity. Researchers are more likely to make biased decisions when conducting qualitative research (rather than quantitative research), because relying on observations and unstructured interviews as major data-gathering methods means that researchers filter the data through their perceptions (McDonald 2000). In addition, researchers' cultural identity may influence their design and approach decisions as well as their interpretations of what they see as culturally relevant. For instance, Western gerontologists emphasise maintaining one's independence into old age, whereas gerontologists from non-Western cultures are more accepting of interdependent relationships in later life. This difference in value orientation leads to very different definitions of 'successful ageing' and 'productive ageing'. Torres (1999) argued that there is no universal idea of what constitutes successful ageing and that studies of it should adopt culturally-relevant theoretical frameworks. Even more important is the claim that Rowe and Kahn's (1997) model of successful ageing is culture specific, shaped by values that are not only Western but distinctly American. The very language of Rowe and Kahn's paradigm reflects a competitive society that prizes external appearances of success and values individual achievements and initiative (Holstein and Minkler 2003; Torres 1999). For older Americans, successful ageing is measured by degrees of self-sufficiency and independence, or how well these elders can function on their own. For elders in other cultures – particularly in Asia.

Vijver and Leung (1997) argued that bias in cross-cultural research was of three types: construct, method and item bias. *Construct bias* occurs when there are problems identifying constructs across cultural groups. For instance, filial piety is a vital construct in many Asian cultures and this term is often included in studies of ageing and older people (Li *et al.* 2006). While some Western studies also adopt the similar or related concepts such as respect, honour, and support (Kendig *et al.* 1999), filial piety is seldom included in the research. In addition, the core concepts of filial piety regulate children's attitudes and behaviour towards old-age support which may include the expression of responsibility, respect, devotion to parents under all circumstances, both physical and emotional care of

parents, and prioritising family harmony over individual gratification or identity (Treas and Wang 1993; Zhan 2004). Compared to filial responsibility in the West, which focuses on fulfilling the needs of parents when they are no longer able to take care of themselves, filial piety in Asia focuses heavily on obligations and the devotion of children to parents throughout the lives of the parents (Ng, Phillips and Lee 2002).

This thus creates some difficulties for studying this construct across Eastern and Western cultures. *Method bias* occurs when an instrument has particular characteristics that may influence scores or when the administration of the study itself gives rise to some unexpected bias. For instance, many Asian older adults do not feel comfortable reporting extreme scores on instruments designed to measure life satisfaction. They tend to choose answers that score in the middle (Chappell *et al.* 2000). Finally, *item bias* involves measurement issues, such as poor item translation, inadequate item formulation, or incidental differences in the appropriateness of item content (Vijver and Leung 1997). For instance, researchers have pointed out the need to consider the impact of culture in measuring depressive symptoms in older adults (Mui, Burnette and Chen 2002). High rates of overall and item-specific non-response on the Center for Epidemiologic Studies Depression Scale (CES-D) may be attributable to socio-cultural and contextual factors rather than the presence or absence of depression. A study of quality of life among Chinese older adults found that 'eating' is a very important item that reflects quality of life (Chan *et al.* 2004), but this item is missing from most quality-of-life scales developed in Western cultures.

After the research design is complete, an immediate challenge facing gerontology researchers is *gaining access to different cultures*, which may sound simple but is actually quite difficult. This is particularly true for cross-cultural research, which involves much co-ordination and logistics. Researchers find it difficult to engage directly with research participants because of language barriers or fears of compromising the integrity of the study. Older adults in many societies, particularly those in the current cohort, tend to know only one language. If the researcher cannot speak that language, it will be therefore impossible for him or her to collect information directly from the participants. Researchers may also be biased because of their cultural identity and thus may infer or project outcomes on participants. According to Brislin (1976), language differences also make it difficult to create accurate measurement tools, even using translation. Many times it is difficult to determine whether a translation is correct and whether the participants actually understand the original questions. For instance, it is very difficult to translate correctly the English term *self-respect* into Chinese. One cross-cultural study on life satisfaction

asked participants about self-respect (Chappell *et al.* 2000). Although the term was translated into Chinese, the resulting translation was very rude, and most Chinese older adults refused to respond.

Another challenge of cross-cultural research related to language is ensuring that the questions asked are *meaningful for different cultures*. Brislin (1976) stated that some instruments created for one culture are not useful in others because not all cultures share the same values. For instance, ageing in the West is a cause for anxiety and managed by attempts to forestall the associated inevitable physical and mental declines (Andrews 1999; Cardona 2008; Holstein and Minkler 2003). In individualistic culture, elders think of successful ageing in terms of their personal outlook on the world, stressing optimism, motivation and enthusiasm (Cardona 2008). For older adults in this culture, success is measured by degrees of self-sufficiency and independence, how well they can function on their own. On the other hand, the concept of self-sufficiency is something of a mystery for older adults in a collectivistic culture. Why would anyone with a family willing to meet their needs want to be self-sufficient in old age? (Torres 2002). Collectivistic culture affords permission for elders to slow down and take a more contemplative view of life, freed from the pressures of productive labour (Hooymann and Kiyak 2008). In some cultures, old age is a stage of life not to be feared or avoided but accepted, with all of its challenges (Torres 2003). Therefore, Western instruments that measure ageism or successful ageing may not be useful for studying societies that respect and revere elders for their knowledge and wisdom.

Conducting cross-cultural gerontology research with other professionals and working as a team can create challenges as well. There are always differences in philosophies, assumptions, and approaches among researchers; it is therefore important to *contextualise the meaning of culture*. Defining terms, especially the term *culture*, will promote better understanding and contextualising among researchers and hence improve the overall study. For example, are differences among cultures attributed specifically to language, customs or religion? Should any similarities be attributed to culture? (*cf.* Laungani 2007).

Recommended strategies for conducting cross-cultural gerontology research

In response to the challenges outlined above, here I discuss five recommended strategies for conducting cross-cultural gerontology research: (a) setting up an international multicultural gerontology research team, (b) becoming familiar with the local culture and maintaining good

relationships with community leaders, (c) studying only those aspects of behaviour that are functionally equivalent while avoiding the idiosyncratic, (d) selecting appropriate measures of context variables, and (e) encouraging equal partnership and open communication among colleagues. These strategies can help researchers improve their methods and can increase the validity and reliability of the research.

Friedemann, Pagan-Coss and Mayorga (2008) highlighted the importance of using an *international multicultural research team* to reach agreement on culturally-congruent findings and interpretations. Using a multicultural team approach not only increases the validity of the research but also enables researchers to raise their understanding of how various nations (and even cities) are preparing for and coping with the challenges of population ageing (Sykes 2007). Researchers have been putting more effort into forming collaborations with colleagues in other countries and continents (Sykes 2007). These are increasingly feasible with the spreading availability of low-cost e-mail, online chat, networking and internet video-telephone communication tools.

The next steps after setting up an international multicultural research team is to *familiarise oneself with the local culture* and *form good relationships with community leaders*. Researchers' efforts to orient and immerse themselves in the local culture serve two purposes. First, learning about the local culture helps researchers understand its intricacies and raises the likelihood that the selected instruments and cultural comparisons are appropriate and valid. Second, community leaders and local researchers are immensely valuable in facilitating communication and providing access to local community facilities and populations.

Cross-cultural research faces more threats to its validity than other types of intra-cultural research (Vijver and Leung 1997). One way to help ensure validity is to study only *functionally equivalent behaviour* and to avoid the *idiosyncratic*. This means that cross-cultural gerontology research needs to be relevant and inter-related, covering topics such as the ageing process and how culture can be an attribute. An appropriate research question is required. It is important to keep questions realistic. When asking questions about culture, Ember and Ember (2000) recommended that they are focused on a 'small' aspect. If a question is too 'big', it may not be answerable. In comparative research there are four types of 'good' questions: *descriptive*, *i.e.* those that deal with the prevalence or frequency of a trait; *causal*, *i.e.* those that seek answers to causes of a trait or custom; *consequential*, *i.e.* those that ask about the effect of a trait or custom; and *non-directional relational*, *i.e.* those that ask whether two traits are related, without implying cause or consequence (Ember and Ember 2000). It is important to construct the research question correctly because this will determine the

dependent and independent variables, thus pointing the researcher in the right direction for the next step in the research study.

After the research question has been formulated, the next steps are to define the variables and choose the measurement methods. Because there are variant definitions and understandings of culture, it is difficult to research consistently. One solution is to replace the concept of culture with constituents. *Constituents* are context variables that can be person related, such as age, gender, or psychological characteristics, and that are used to define variables and validate interpretations of cross-cultural differences (Vijver and Leung 1997). The issue of selecting and measuring the *appropriate context variable* reflects the idea that there needs to be a measure for all variables. Vijver and Leung (1997) used the word ‘unpackage’ to describe the translation of concepts into more contextualised variables in order to provide better interpretations and measurements. Unpackaging concepts is also a means of either verifying or negating interpretations. Vijver and Leung described a three-step process of unpackaging culture: using appropriate variables to either verify or negate an interpretation of cultural differences, deciding on how context variables will be measured, and using statistical techniques to evaluate the success or lack thereof of context variables in explaining cross-cultural differences.

Lastly, *equal partnerships* and *open communication* is optimal among the members of multicultural teams. They create a collaborative tone that helps to overcome language barriers and differences in researchers’ cultures and disciplinary backgrounds. It can also help create a platform for researchers to voice their opinions and ideas. Only by achieving equal partnerships and open communication can research teams nurture trust. Establishing an equal partnership means respecting one another’s priorities; maintaining open communication means listening attentively and communicating feelings and emotions reciprocally. This will help not only in future endeavours but also in the existing research experience.

Cross-cultural research on long-term care

This section describes a cross-cultural collaboration team that carried out research on long-term care in order to illustrate how the difficulties of conducting cross-cultural research in gerontology can be overcome. InterRAI is a collaborative network of researchers in more than 30 countries that is committed to improving health care for older people with frailties or disabilities. Most of the members are geriatricians or social gerontologists. The organisation also encourages and financially supports research by members of the corporation, called Fellows, particularly

to bring about systematic improvements in research tools. The goal of interRAI is to promote evidence-based clinical practice and policy decisions through the collection and interpretation of high-quality data about the characteristics and outcomes of the patients, residents and service users in a variety of health and social services settings, including different cultural and social contexts. Specifically, interRAI aims to increase the effectiveness and use of assessment instruments and applications through cross-national research and development activities. Thus, the organisation actively pursues partnerships with organisations and governments that wish to adopt their research tools. Through Fellows in different countries, research teams become familiar with local cultures and maintain good relationships with community leaders.

Recognising that one of the challenges of conducting cross-cultural research is to use comparable measures and instruments, interRAI has developed and maintains high standards for these tools. Each adopted version of a tool follows rigorous research and testing to establish the reliability and validity of items, outcome measures, assessment protocols, case-mix algorithms, and quality indicators. More than 400 articles have been published by researchers affiliated with interRAI (*see* www.interrai.org for a complete bibliography). Close to half of these publications have adopted the cross-cultural comparison approach, which contributes greatly to researchers' understanding of international long-term care programmes and practices.

To date, interRAI has launched 12 related assessment systems, including of home care, long-term care facilities, assisted living, and palliative care (these relate to only functionally equivalent aspects of behaviour and avoid the idiosyncratic). Each of these is at a different stage of development. A mature assessment system has: (a) a data collection form, (b) a user manual, (c) triggers, (d) clinical assessment protocols, and (e) status and outcome measures. Software vendors have designed commercial products to support the use of interRAI assessment systems. Each country is allowed to modify a certain portion of the instrument content to fit its social context (selecting appropriate measures of the context variables). In addition, various enhancements, including eligibility algorithms, quality indicators, case-mix classification systems, data integrity tools, and best-practice protocols, are available for some instruments. The process of developing assessment tools and enhancing systems involves many regular meetings in a year by Fellows from each country. In other words, there is an equal partnership and open communication among the research team members, all sharing ownership of the products.

Although each instrument in the interRAI family of tools and applications has been developed for a particular population, they are also

designed to form collectively an integrated health information system. InterRAI instruments all share a common language; that is, they refer to the same clinical concept in the same way. Using common measures enables clinicians and providers in different care settings to improve continuity of care as well as to integrate care and supports for each individual. Use of a common language also enables families, advocates and public payers to track the progress of programme participants across settings and over time. Such information can yield important findings regarding what works to improve individuals' quality of life.

This common language feature allows for cross-cultural comparisons so that countries can learn from one another in terms of long-term care programmes and practices. One recent publication from interRAI Fellows, 'Use of physical restraints and anti-psychotic medications in nursing homes: a cross-national study' (Feng *et al.* 2009), took advantage of this feature. This study compared inter- and intra-country differences in the prevalence of physical restraints and anti-psychotic medications in nursing homes, and examined aggregated resident conditions and organisational characteristics that correlated with these treatments. The researchers used a standardised Resident Assessment Instrument to collect data from five countries (Canada, Finland, Hong Kong, Switzerland and the USA). A total of 14,504 long-term care facilities providing nursing home-level services in these countries were included. It took the research team approximately 18 months to complete the study. The researchers met twice as a group to discuss the study, once at the beginning to map out a study plan, and once toward the end to work on interpreting the study findings. Numerous e-mail exchanges took place in between these two meetings and prior to the publication of the manuscript. The study concluded that there is substantial unexplained variability in the prevalence of physical restraint and anti-psychotic medication use in nursing home facilities both between and within countries. The study pointed to the importance of understanding the factors specific to each country that contribute to variation in use rates and highlighted each country's best practices.

Conclusions

Cross-cultural research and gerontology have come together because of an overwhelming need: to study human behaviour and the ageing process worldwide. The epidemic of population ageing brings striking needs, and many cross-cultural researchers are eager to study the growing older population. However, there remain many challenges in conducting

cross-cultural research related to methodology and research costs. Researchers are getting more and more experience dealing with these challenges, thus synthesis and systematic documentation of recommended research strategies is necessary. This paper has documented some of the methodological challenges that face cross-cultural gerontology researchers, including how to design an equivalent and unbiased study, how to gain access to different cultures, how to contextualise cultures, and how to ensure that questions are meaningful for different cultures. Some recommended strategies for dealing with these challenges were proposed, including setting up international multicultural teams, becoming familiar with the local culture and maintaining good relationships with community leaders, studying aspects of behaviour that are equivalent while avoiding those that are idiosyncratic, selecting appropriate measures of context variables, and encouraging equal partnership and open communication. One challenge of cross-cultural research in general that has not been addressed here is cost, but as Sykes stated, 'Cross-cultural studies, while challenging to do and difficult to fund, offer tremendous rewards' (2007: 855). Cross-cultural research is essential to establish the generalisability of ageing theories and empirical results. There is a continuing imperative to explore the cross-cultural aspects of ageing.

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