



UNIVERSITY OF LEEDS

This is a repository copy of *The EURO-URHIS 2 project in Ho Chi Min City: contextual adequacy in cross-cultural research*.

White Rose Research Online URL for this paper:
<http://eprints.whiterose.ac.uk/84700/>

Version: Accepted Version

Article:

Steels, S (2014) The EURO-URHIS 2 project in Ho Chi Min City: contextual adequacy in cross-cultural research. Health Promotion International. dau070. ISSN 0957-4824

<https://doi.org/10.1093/heapro/dau070>

Reuse

Unless indicated otherwise, fulltext items are protected by copyright with all rights reserved. The copyright exception in section 29 of the Copyright, Designs and Patents Act 1988 allows the making of a single copy solely for the purpose of non-commercial research or private study within the limits of fair dealing. The publisher or other rights-holder may allow further reproduction and re-use of this version - refer to the White Rose Research Online record for this item. Where records identify the publisher as the copyright holder, users can verify any specific terms of use on the publisher's website.

Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.



eprints@whiterose.ac.uk
<https://eprints.whiterose.ac.uk/>

Title: The EURO-URHIS 2 project in Ho Chi Min City: contextual adequacy in cross-cultural research

Key words: Cross-cultural research, EURO-URHIS 2, Vietnam, methodology.

Abstract

The European Urban Health Indicators System Project Part 2 (EURO-URHIS 2) is a cross-national study that was implemented in Europe. It consists of four data collection tools that were specifically developed to collect health data at an urban level. This paper reviews some of the methodological constraints in adapting the EURO-URHIS 2 study in Ho Chi Minh City, Vietnam. No attempt to extend the original study beyond Europe has been reported before. Cultural, political, economic and social differences create specific obstacles as well as challenges. This paper sets out how these challenges were addressed, examining key aspects of the methodology, including study design, translation of the questionnaire and data collection.

It was found that the EURO-URHIS 2 adult data collection tool methodology could not be replicated in Vietnam. A lack of basic infrastructure and population registers led to significant changes being made to the sampling and survey administration. It was recommended that the Expanded Programme on Immunization (EPI) was used as the replacement method. Despite the limitations in using the EPI method, the overall strengths and benefits were found to address methodological issues and the resource poor setting.

Introduction

Rapid urbanisation has led to more than half of the world's population living in an urban area (WHO and Fund 2008). The consequences of this are strains on existing resources such as access to healthcare, housing and infrastructure (Galea and Vlahov 2005). Therefore, access to data at the urban level is important for those involved in policy making in order to assess and address these issues. This is especially important for developing countries where resources are already limited without the added strain of rapid urbanisation.

Several factors influenced the decision to use the European Urban Health Indicators System Project Part 2 (EURO-URHIS 2). Firstly, there are very few studies in Vietnam that focus on health surveys at an urban level. Secondly, the types of existing health data available at the urban and in some cases, national level, are limited. Where data has been collected by other organisations, such as the World Health Organization (WHO), data presented are sometimes incomplete, missing or rely on estimates. For some databases, indicators are not defined and calculations are not stated. Thirdly, the EURO-URHIS 2 study was developed as a cross-national survey to collect demographic and health data from urban populations to inform urban health indicators. Thus, standardised procedures for each data collection tool were constructed, enabling them to be replicated across Europe using step-by-step manuals. The chance to work with the Pham Ngoc Thach University of Medicine presented itself as a unique opportunity to test the wider application of the data collection tools beyond Europe in a country which is likely to urbanize rapidly in the near future. The following questions will be examined in this paper:

1. Is the EURO-URHIS 2 adult survey data collection tool suitable for use outside of Europe?
2. If so, are modifications of the EURO-URHIS 2 adult survey required to use this tool outside of Europe?

The structure of this paper is as follows. First an overview of health in Vietnam is presented, including the historical legacy of the French occupation of Indochina and how this has shaped health in Vietnam through the decades. Next, a discussion the EURO-URHIS 2 study with reference to the first European Urban Health Indicators System study and the study

objectives. Then, some of the key methodological problems encountered with adult survey will be outlined. Finally, a review of other health surveys administered in Vietnam with an emphasis on methodological challenges will be discussed. This is followed by our conclusions and recommendations.

Health in Vietnam

Vietnam is a country located on the eastern edge of what is known as the Indochina peninsula. It shares its borders with China to the north, and Laos and Cambodia to the West. It is divided into 58 provinces located within seven eco-geographically diverse regions. There are also three centrally controlled municipalities (Dixon 2004, HEPVIC 2010).

Vietnam has a population of just over 85.8 million inhabitants, 30% of whom live in urban areas. The remaining population live in rural areas (VGSO 2010). Since the Doi Moi reforms in 1986, Vietnam has seen high levels of economic growth, reaching and maintaining its rank of a medium developing country according to the Human Development Index (UNDP 2009).

The most important political force is the Communist Party, yet the introduction of capitalism through economic reform has led some to question the amount of power the Communist Party holds on its people. Ho Chi Minh City, where this study was conducted, is often regarded as the commercial capital of Vietnam. Located in the South, it was formally known as Saigon and capital of the Republic of Vietnam from 1956 until 1975, when it fell to the Northern Vietnamese forces (McCargo 2004). Ho Chi Minh City can be described as a ‘typical’ Southeast Asian city: the heady mix of towering glass skyscrapers and shopping malls contrast severely with dilapidated and often overcrowded housing.

Historically, there has been an emphasis on the prevention of illness, and health-care initiatives. This dates back to the French occupation of Indochina when public health initiatives were first introduced in Vietnam. The French Indochina war followed by World War II and the Vietnam War established the need for a comprehensive health system (Ladinsky and Levine 1985, Lewis and MacPherson 2008, Monnais 2008). As a result, health has been an important agenda for the Vietnamese government through the twentieth and twenty-first centuries. This can be seen in the number of health policies and programmes that have been implemented over the decades (Matsuda 1997, HEPVIC 2010). Since the year

2000, health policy has shifted in focus towards addressing the Millennium Development Goals (MDGs), with new projects and programmes being created and funded in order to meet the challenging MDGs targets by the year 2015. However, health problems in the elderly, chronic diseases and the increase in incidence of some communicable diseases are posing threats for the health sector. This has become a growing concern to the government, especially in industrialised and urbanised areas (MOH 2009).

Background and objectives of the EURO-URHIS 2 study

The EURO-URHIS 2 project is a cross-national study looking specifically at urban health indicators across thirteen countries in 30 cities in Europe. It is the continuation of a previous study that found a set of health indicators that could be measured at an urban level.

This project involves collecting data using four specifically designed data collection tools: an existing data collection database, a survey for adults aged 19+, a survey for 15 year old school children and a policy maker's survey. The construction and design of these tools are reported on the EURO-URHIS 2 project website (<http://www.urhis.eu>).

These data collection tools aim to collect data on 45 urban health indicators from EURO-URHIS 1. These indicators include socio-demographic information (such as age, gender and employment); the physical and social environment (such as access to green spaces and housing); and health (such as vaccinations and access to GPs). These data will be used to develop a comprehensive urban health indicator system. Phase 1 ran from September 2010 to May 2011. Phase 2 started in June 2011 and is still ongoing. All data collection tools were developed with input by all project partners. Prior to starting data collection in Vietnam, we conducted preliminary fieldwork in Ho Chi Minh City to assess the feasibility of using the EURO-URHIS 2 data collection tools in Vietnam.

Methodological problems in the implementation of the EURO-URHIS 2 study in Vietnam

In June 2010, several meetings were held with the Vietnamese project partners in Ho Chi Minh City, Vietnam. The aims of these meetings were to discuss the feasibility of implementing all four data collection tools in Hanoi and Ho Chi Minh City. A number of issues were raised regarding the feasibility of the adult questionnaire. These are discussed below.

Contextual adequacy of the adult questionnaire content

The EURO-URHIS 2 data collection tools were designed as a cross-cultural study. The survey questions cover a range of health and lifestyle questions, providing information on: demographic factors, including urban area and age; social background; socio-economic status; health status, including long standing illnesses and self-reported health; well-being; social relations provided by family, friends and the local community; health behaviours, including physical activity, alcohol and drug use, eating habits; the environment, including access to green spaces; and experience of health services. As is stressed in other cross-cultural studies, validity is often threatened by methodological difficulties (Kroeger 1983, Montgomery and Ezeh 2005, Harpham 2009, Macinko, Starfield et al. 2009). The first of these difficulties was encountered during the translation process.

The adult survey was specially developed to include pre-validated questions from other European cross-national surveys. This was to guarantee the validity of translated questions since the questionnaires were developed in English. For this study, the adult survey was translated into Vietnamese, the official national language of Vietnam. As was found when translating the English questionnaire into European languages, it was not always easy to find the correct words and phrases that matched the English version of the questionnaire. However, as no changes were made to the survey questions to adapt them to the Vietnamese context, fewer problems were encountered when translating the Vietnamese questions back into English. No modifications or adaptations were allowed to the adult survey questions during this study because we wanted to test the replication of the European derived survey.

However, some questions were found not to be appropriate for use in Vietnam. For example, ethnicity is measured by the question ‘What is your ethnic group?’ The answers provided on the questionnaire do not account for the 54 official ethnic groups that make up Vietnamese society (VGSO 2010). Instead they are presented with a list of ethnic groups commonly used in European surveys.

Other questions surrounding eating and drinking habits are also problematic, especially when one considers the difference between Southeast Asian and Western diets. Questions about

milk and butter use are more appropriate for use in Europe but not in Vietnam where diets are centred round rice and noodle dishes. Other behaviours, such as the consumption of alcohol are questionable given that alcohol available to buy in Vietnam is beyond the price range of most Vietnamese households and is mainly drunk by tourists.

In addition, there are other health risks that would have been more appropriate to ask about. For example, it would have been more appropriate for questions related to infectious diseases, which are still common in developing countries, to be asked in lieu of flu vaccinations. This would provide data for separate analysis if the EURO-URHIS 2 were extended to other non-Western countries with similar health-related problems.

Problems with administration, sampling and data collection

We were faced with a number of obstacles and challenges in order to conduct research in Vietnam. Firstly, obtaining permission to conduct research in Vietnam is a labour-intensive and time-consuming process due to the Vietnamese bureaucratic process. This was further prolonged by the EU in completing their project registration process for non-EU institutions. As a result, the study was denied permission to collect data in Hanoi. It should be noted that this study was organised by a university and not a government organisation. This in itself has imposed a number of delays in the way the study has been implemented in Vietnam. Without government backing, it was felt that the study encountered significant delays in the ethics application process.

Secondly, problems were encountered in relation to sampling method. In Europe, the sampling method relied upon population registers. The names and addresses of the population being sampled were completely random and stratified by age and gender. These were then held on a secure database. In Vietnam, we found that there were conflicting reports as to whether an official population register existed. The Vietnamese project partners insisted that no such database was available, although we found that the National Office of Statistics has a population database for carrying out the Census. However, it was unknown if this contained the names and addresses of the Ho Chi Minh City population; whether this was available for non-government use and whether this information was held on a computer or on paper.

Thirdly, it soon became apparent that there was no reliable postal system operating in Vietnam. This resulted in a change of survey methodology. We held a number of discussions with our Vietnamese project partners and a review of the literature was conducted. Our Vietnamese project partners recommended that the Expanded Programme on Immunization (EPI) methodology was used. This would simultaneously resolve both our sampling and survey methodology issues.

A number of concerns were raised with the EPI methodology. Firstly, it would involve face-to-face interviews. This would introduce interviewer bias to the study. As a consequence, we would expect participants in the survey to respond dishonestly for fear of repercussions from the authorities if criticisms are made. Secondly, there were concerns that participants would be too closely grouped within their sampling clusters. This could lead to unrepresentative data for Ho Chi Minh City if all those surveyed lived either in a predominantly affluent or poor area. Thus it was decided that all urban districts to be included in the study would be sampled separately so to ensure a more representative population sample.

Discussion

With this study, it was hoped that some epidemiological data about health-related behaviour amongst Vietnamese adults living in Ho Chi Minh City, Vietnam could be gathered. It was hoped that the EURO-URHIS 2 adult survey could be used to assess feasibility of using the data collection tool beyond Europe. However, during preliminary fieldwork, a number of challenges in the implementation of the data collection tool were found.

These methodological issues were similar to those found in other cross-national studies when transferring an American or European derived study to a global scale. The WHO Healthy Cities Project is one such example. Since 1995, the project has been adopted by a number of developing countries, including Bangladesh, Nicaragua and Pakistan. A number of evaluations (Werna and Harpham 1995, Donchin, Shemesh et al. 2006, Heritage and Dooris 2009) have been conducted using stakeholder analysis, workshops and interviews with project managers, implementers and beneficiaries. One such evaluation by Harpham et al (2001) found that there was very limited political commitment to the project, which in turn varied the level of community involvement and did not have any influence on local or national policy makers as expected (Harpham, Burton et al. 2001).

In a recent review of some of the key issues of urban health within developing countries, Harpham (2009) suggested implementing methodologies that have been developed and used successfully in urban city studies in the USA (Harpham 2009). The studies referred to stem from the United States Big Cities Health Inventory which includes information about socioeconomic, disease and mortality indicators (Benbow, Wang et al. 1998, Harpham, Burton et al. 2001). However, these data are merely extracted from pre-existing sources and do not address methodological issues for collecting these data in the first instance.

Other reviews of conducting health surveys in developing countries have also identified sampling, translation, administrative and cultural specific sensitivities (Sperber, Devellis et al. 1994). Our first challenge was to adapt and validate the adult survey. As the survey was developed in English, accurately translating the questionnaire into Vietnamese was a challenging task. This also raised concerns regarding the relevance of the questions being asked. The EURO-URHIS 2 adult survey was developed in Europe using other European validated survey questions. However, one must question the relevance of asking European health behaviour questions in a developing country. These issues were also found in the Health Behaviour School-Aged Children study (HBSC) when it was administered in Semarang, Indonesia (Smet, Maes et al. 1999).

As was discovered with the HBSC study in Indonesia, structural obstacles were more problematic. The lack of a reliable postal system in Vietnam meant a change in the way the adult survey would be administered to the Ho Chi Minh City population. Our project partners suggested the Expanded Programme on Immunisation (EPI) methodology. This method is used globally in some shape or form due to its simplicity and can be described as the survey methodology of choice for hundreds of studies conducted in developing countries. It uses face-to-face interviews and cluster sampling as part of its methodology, the strengths and limitations of which have been discussed elsewhere (Lemeshow and Robinson 1985, Cutts, Soares et al. 1990, Brogan, Flagg et al. 1994, Turner, Magnani et al. 1996, Cutts 1998).

However, it was established in the literature that studies that have conducted face-to-face interviews have found that respondents are often suspicious of interviewers and there is a reluctance to speak to anyone involved (directly or indirectly) with the 'authorities' for fear of repercussions if criticisms are made (Kroeger 1983, Sperber, Devellis et al. 1994, Smet,

Maes et al. 1999). This is particularly problematic in Vietnam where surveys, including the census, are carried out using face-to-face interview techniques. For the Vietnamese census and other governmental surveys, each questionnaire was found to be repeated with each household taking part to eliminate unreliable data and interviewer bias (Haughton, Haughton et al. 1999). However, such a method is not only time consuming but it still does not provide or guarantee accurate data.

There are other reasons to doubt that face-to-face methods are a reliable way to measure health behaviour in adults. Although the political influences of the Communist Party are clear, researchers should not underestimate cultural and social influences. As with other countries in Southeast Asia, 'telling the truth' is of less importance than 'losing face' and avoiding conflict (Smet, Maes et al. 1999). As a result, many risk behaviours may be underreported in answers which will conform to social and cultural norms.

Despite these limitations, the EPI methodology has several strengths: it has been used to administer health surveys in developing countries because the method is standardised, quick to implement and has low costs (Yoon, Katz et al. 1997, Milligan, Njie et al. 2004). This could provide the EURO-URHIS 2 adult survey with a methodology that has been used globally if the adult survey were to be administered in other developing countries.

Furthermore, a number of extensions and adaptations on the EPI methodology have been suggested in literature (Bennett, Woods et al. 1991, Brogan, Flagg et al. 1994, Turner, Magnani et al. 1996). These could provide alternative sampling procedures that are in keeping with what the EURO-URHIS 2 project was trying to achieve: to collect demographic and health data from urban populations to inform urban health indicators.

Looking towards other health surveys that have been conducted in Vietnam for other methods, the Demographic and Health Surveys (DHS) has been implemented three times in Vietnam (ICFInternational 2012). The DHS was designed to expand on data collected by the World Health Surveys and Contraceptive Prevalence Surveys and is funded by USAID (Corsi, Neuman et al. 2012). It uses a variation of the EPI methodology including household listing and face-to-face interviews to administer the survey (ICFInternational 2012). Whereas the EPI methodology uses a cluster sampling frame, DHS offers a variety of sampling frame

options, depending on the type of survey being administered, the survey budget and the sample size (ICFInternational 2012).

While the different sampling options provide methodological flexibility, issues of interviewer bias and false survey data have been reported (Verma and Le 1996). Another issue is that the DHS is funded by USAID who have the capacity and finances to train staff in data collection and provide resources for data storage (Short Fabic 2012). Training and support on this scale would not be possible with the EURO-URHIS 2 adult survey because of funding restrictions. As the survey was designed to be used by local authorities it is important to note that some may have resource and financial constraints. Therefore, in modifying the survey methodology we must be considerate of these factors.

Conclusions

In conclusion, methodological challenges still remain an important issue when conducting research in developing countries such as Vietnam. The literature had highlighted a number of issues with regard to designing population based health research methodologies, particularly sampling and survey administration. The findings from our fieldwork supported these concerns.

Although it was found that the EURO-URHIS 2 adult data collection tool methodology could not be replicated in Vietnam using the European methodology, it was still possible to administer the survey using a modified approach. Due to the lack of infrastructure in Vietnam, it was recommended that the EPI methodology was used in replacement. The EPI method of administering surveys is widely used in developing country studies. Despite the limitations in using the EPI methodology, the simplicity, low cost and standardised method provides resource poor countries with the opportunity to use the EURO-URHIS 2 adult survey to collect demographic and health data from urban populations.

References

- Benbow, N., Y. Wang and S. Whitman (1998). "The Big Cities Health Inventory, 1997." *Journal of Community Health* 23(6): 471-489.
- Bennett, S., T. Woods, W. M. Liyanage and D. L. Smith (1991). "A simplified general method for cluster-sample surveys of health in developing countries." *World Health Stat Q* 44(3): 98-106.
- Brogan, D., E. W. Flagg, M. Deming and R. Waldman (1994). "Increasing the accuracy of the Expanded Programme on Immunization's cluster survey design." *Annals of Epidemiology* 4(4): 302-311.
- Corsi, D. J., M. Neuman, J. E. Finlay and S. Subramanian (2012). "Demographic and health surveys: a profile." *International Journal of Epidemiology* 41(6): 1602-1613.
- Cutts, F., A. Soares, A. V. Jecque, J. Cliff, S. Kortbeek and S. Colombo (1990). "The Use of Evaluation to Improve the Expanded Program on Immunization in Mozambique." *Bulletin of the World Health Organization* 68(2): 199-208.
- Cutts, F. T. (1998). "Advances and challenges for the expanded programme on immunization." *British Medical Bulletin* 54(2): 445-461.
- Dixon, C. (2004). *State, Party and Political Change in Vietnam. Rethinking Vietnam*. D. McCargo. London, RoutledgeCurzon: 15-26.
- Donchin, M., A. A. Shemesh, P. Horowitz and N. Daoud (2006). "Implementation of the Healthy Cities' principles and strategies: an evaluation of the Israel Healthy Cities network." *Health Promot.Int.* 21(4): 266-273.
- Galea, S. and D. Vlahov (2005). "Urban health: evidence, challenges, and directions." *Annu.Rev.Public Health* 26: 341-365.
- Harpham, T. (2009). "Urban health in developing countries: what do we know and where do we go?" *Health Place.* 15(1): 107-116.
- Harpham, T., S. Burton and I. Blue (2001). "Healthy city projects in developing countries: the first evaluation." *Health Promot.Int.* 16(2): 111-125.
- Haughton, D., J. Haughton, S. Bales, T. T. K. Chuyen and N. N. Nga (1999). *Health and Wealth in Vietnam: An Analysis of Household Living Standards*. Singapore, Institute of Southeast Asian Studies.
- HEPVIC (2010). *Country Report on Health policy-making in Vietnam*.
- Heritage, Z. and M. Dooris (2009). "Community participation and empowerment in Healthy Cities." *Health Promot.Int.* 24 Suppl 1: i45-i55.
- ICFInternational (2012). *Demographic and Health Survey Sampling and Household Listing Manual*. Calverton, Maryland, U.S.A., ICF International.

- Kroeger, A. (1983). "Health Interview Surveys in Developing-Countries - A Review of the Methods and Results." *International Journal of Epidemiology* 12(4): 465-481.
- Ladinsky, J. L. and R. E. Levine (1985). "The Organization of Health Services in Vietnam." *Journal of Public Health Policy* 6(2): 255-268.
- Lemeshow, S. and D. Robinson (1985). "Surveys to measure programme coverage and impact: a review of the methodology used by the expanded programme on immunization." *World Health Stat.Q.* 38(1): 65-75.
- Lewis, M. J. and K. L. MacPherson (2008). *Public health in Asian and the Pacific: An introduction. Public Health in Asia and the Pacific: Historical and comparative perspectives.* M. J. Lewis and K. L. MacPherson. London and New York, Routledge: 1-9.
- Macinko, J., B. Starfield and T. Erinoshio (2009). "The impact of primary healthcare on population health in low- and middle-income countries." *J Ambul Care Manage* 2009(2): 150-171.
- Matsuda, S. (1997). "An introduction to the health system in Vietnam." *Environ.Health Prev.Med.* 2(3): 99-104.
- McCargo, D. (2004). *Introduction. Rethinking Vietnam.* D. McCargo. London, RoutledgeCurzon: 1-12.
- Milligan, P., A. Njie and S. Bennett (2004). "Comparison of two cluster sampling methods for health surveys in developing countries." *International Journal of Epidemiology* 33(3): 469-476.
- MOH (2009). *Joint Annual Health Review.* M. o. Health. Hanoi, Vietnam.
- Monnais, L. (2008). 'Could confinement be humanised?' A modern history of leprosy in Vietnam. *Public Health in Asia and the Pacific.* M. J. Lewis and K. L. MacPherson. Abingdon, Routledge: 122-152.
- Montgomery, M. R. and A. C. Ezeh (2005). *Urban Health in Developing Countries: Insights from Demographic Theory and Practice.* Handbook of Urban Health: Populations, Methods and PRactice. S. Galea and D. Vlahov. New York; London, Springer: 317-360.
- Short Fabric, M., Choi, Y.J., Bird, S., (2012). "A systematic review of Demographic and Health Surveys: data availability and utilization for research." *WBulletin of the World Health Organization* 90: 604-612.
- Smet, B., L. Maes, L. De Clercq, K. Haryanti and R. D. Winarno (1999). "The health behavior in school-aged children study in Semarang, Indonesia: methodological problems in cross-cultural research." *Health Promotion International* 14(1): 7-16.
- Sperber, A. D., R. F. Devellis and B. Boehlecke (1994). "Cross-Cultural Translation." *Journal of Cross-Cultural Psychology* 25(4): 501-524.

Turner, A. G., R. J. Magnani and M. Shuaib (1996). "A Not Quite as Quick but Much Cleaner Alternative to the Expanded Programme on Immunization (EPI) Cluster Survey Design." *International Journal of Epidemiology* 25(1): 198-203.

UNDP (2009) "Human Development Report 2009: Vietnam Country Report."
<http://hdrstats.undp.org/en/countries/profiles/VNM.html>.

Verma, V. and T. Le (1996). "An analysis of sampling errors for the Demographic Health Surveys." *Int Stat Rev* 64(3): 265-294.

VGSO (2010). The 2009 Vietnam Population and Housing census: Completed results. Vietnam, General Statistics Office Vietnam.

Werna, E. and T. Harpham (1995). "The evaluation of healthy city projects in developing countries." *Habitat International* 19(4): 629-641.

WHO and U. N. C. s. Fund (2008). *Progress in Drinking Water and Sanitation: Special Focus on Sanitation, Joint Monitoring Programme for Water Supply and Sanitation*. New York; Geneva.

Yoon, S. S., J. Katz, K. Brendel and K. P. West, Jr. (1997). "Efficiency of EPI cluster sampling for assessing diarrhoea and dysentery prevalence." *Bull World Health Organ* 75(5): 417-426.