

HARMONIZATION OF AGING
SURVEYS
AND CROSS-NATIONAL STUDIES OF AGING

Feb 24 ~ 27, 2007
Chiang Mai, Thailand

EXECUTIVE SUMMARY

National Institute on Aging
Behavioral and Social Research Program

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March 2007

**National Institute on Aging
Scientific Meeting on
Harmonization of Aging Surveys and Cross-National Studies of Aging**

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EXECUTIVE SUMMARY

This document summarizes the Harmonization of Aging Surveys and Cross-National Studies on Aging meeting that occurred on Feb 24 through Feb 27, 2007, supported by the National Institute on Aging. The meeting was organized by Jinkook Lee of Ohio State University and Rand Corporation and John Phillips of the National Institute on Aging. Among the participants were the principal investigators of aging surveys from around the world, experts in aging research, and program officers at NIA and the Census (a full list of attendees is available in Appendix A).

I. PURPOSE

The potential benefits of cross-national studies of aging have been widely recognized. Increasingly, social scientists are realizing the necessity of comparative research in order to understand fully the impact of social and institutional phenomena on aging. However, such studies are still small in numbers, and scientific opportunities have not yet been fully exploited.

Cross-national, comparative studies require comparable data sets. To benefit from the possibility of exploiting cross-national differences to understand the effects of various policies, data collection efforts in various countries must be harmonized in the sense that conceptually comparable information is collected, and procedures (e.g., sampling and quality control) are synchronized to the extent possible (National Research Council, 2001).

While a great deal of harmonization efforts have occurred among existing and newly-developing aging data sets, including those found in the Health and Retirement Study (HRS), English Longitudinal Study of Ageing (ELSA), Survey of Health, Ageing, and Retirement in Europe (SHARE), and the Korean Longitudinal Study of Aging (KLoSA), more deliberate efforts are necessary to establish comparability. Ex ante comparability can only be established when communication occurs among researchers during the development stage, and ex post comparability requires deliberate survey evaluation.

Moreover, several countries, including China, Thailand, Ireland, and India, are developing similar data sets, creating urgent necessity to discuss cross-national comparability; what should be harmonized at the international and/or regional levels, and what should be localized. International comparative research would clearly be advantageous, as new efforts would benefit

from existing surveys as well as be encouraged to harmonize their instruments with those already available in other countries.

Within this context, the Behavioral and Social Research (BSR) Program of the National Institute on Aging (NIA) convened a scientific meeting on the Harmonization of Aging Surveys and Cross-National Studies of Aging. The goals of the scientific meeting were: (1) to enhance ex ante comparability by bringing together the principal investigators of aging surveys from around the world who are directly connected to the creation of these data; (2) to facilitate cross-national comparative studies by discussing ex post harmonization of aging surveys; and (3) to establish collaboration among various aging projects by developing an international network of researchers.

II. OVERVIEW

Richard Suzman opened the meeting to set the stage for discussion on aging surveys by articulating current challenges in changing health scenes and scientific obstacles that face comparative studies on aging. The scientific meeting was organized as follows (The program can be found in Appendix B):

First, the principal investigators (PIs) introduced each aging survey, starting with the Health and Retirement Study (HRS) and European Surveys, including the English Longitudinal Study of Ageing (ELSA) and Survey of Health, Ageing, and Retirement in Europe (SHARE), then surveys in Asia and other aging surveys, including: the Korean Longitudinal Study of Aging (KLoSA), Chinese Health and Retirement Longitudinal Study (CHARLS), Health, Aging, and Retirement in Thailand (HART), Health and Retirement Study in India, and Indonesia Family Life Surveys (IFLS), WHO Study on global AGEing and adult health (SAGE), an International Network of field sites with continuous Demographic Evaluation of Populations and Their Health in developing countries (INDEPTH), Puerto Rican Elderly: Health Conditions (PREHCO), Mexican Health & Aging Study (MHAS), and The Irish Longitudinal study on Aging (TILDA).

Experts on aging research in the areas of health (Lisa Berkman, James Smith, and Alberto Palloni); employment and retirement (David Wise and James Banks); income, wealth and consumption (Axel Boersch-Supan, Robert Willis, and John Strauss); and social network and psychosocial measures (Lisa Berkman and David Weir) discussed key concepts in each domain.

This discussion was followed by a presentation by Jinkook Lee, who evaluated how current aging surveys measure each domain and their ex-ante comparability. The open-discussion of conference attendees highlighted the importance of scientific guidance to survey design, which allows not only accurate measurement of critical concepts, but also investigates key research questions.

Recent innovations brought in by various aging surveys were also presented, with innovations ranging from biomarkers (Lisa Berkman, James Banks, David Weir, and Jinkook Lee) to vignettes (Somnath Chatterji and Arie Kapteyn), life histories (James Banks and Bas Weerman), interventions (RoseAnne Key and David Weir), and the Internet (Arie Kapteyn and Bas Weerman). Discussion of these innovations focused on research opportunities brought by

recent innovations, and the presentations were accompanied by demonstrations, which highlighted the technical advancements that made such innovation feasible.

Through international collaboration, scientific innovations can be learned more quickly, accelerating scientific progress. The importance of cross-national studies of aging warrants a follow-up meeting, and further collaboration is encouraged, particularly at the regional level.

III. SETTING THE STAGE

Richard Suzman opened the meeting by articulating the current challenges in changing health scenes, such as emergence of new disease epidemics, combined chronic and infectious diseases, and prolonged longevity. In order to better understand population aging and provide policy solutions, Suzman emphasized the importance of building scientific communities for comparative studies across cultures, institutions, nations, and regions and called for discussion on the following scientific challenges:

- What are the important dimensions of cross-national studies?
- What do we need to compare? Cultures, institutions, countries, regions?
- How comparable should aging surveys be in order to conduct comparative studies?
- Are there different integration models across studies?

A follow-up meeting on cross-national studies of aging was advocated among conference attendees, who reached the following consensus: first, cross-national studies are proven to be useful in formulating policy solutions to prepare for population aging. One good example is the Wise and Gruber study on public pensions, which provides useful insights as to how pension policy influences retirement behavior, and another example is Chris Murray's cross-regional study on global disease.

Second, conducting cross-national studies requires in-depth knowledge of institutions and cultures. Fostering international collaboration is a key to facilitating cross-national studies, and providing contextual information on institutions and cultures was recommended in order to do so.

Third, in discussing comparability of aging surveys, it was noted that it is important to recognize that goals are not restricted to standardization, and that both evolution and innovation occur over time. While standardization would be useful in some contexts, evolution and innovation occurs over time in surveys that are introduced later, and such feedback is infused into other surveys. Therefore, it is critical to identify key measures that would be useful for standardization, while still fostering innovation and evolution to account for new information that occurs over time.

It is also important to examine different models of integration. Most HRS-type studies are population-based studies, but some level of integration of small-scale, INDEPTH study will yield fruitful findings.

Different interview modes were also introduced in data collection, such as adding mail surveys or Internet-based surveys to traditional telephone or face-to-face interviews; the goal of which is to capture key measurements in the most cost-effective way. In conjunction with longitudinal survey, observational or interventional study integration can also bring insights to the field.

IV. OVERVIEW OF AGING SURVEYS

The PIs of each aging surveys presented an overview of each study, and the associated power-point slides used for each presentation are attached in Appendix C.

The first set of discussions focused on the HRS, ELSA, and SHARE studies. Robert Willis, co-director of the HRS study, introduced the study's design and recent developments. Willis attributed the unprecedented success of the HRS, characterized by a large number of scientific papers using the HRS, to its researcher-initiated, bottom-up approach. During the discussion, Smith and Suzman recited the importance of science-driven, researcher-initiated approaches to the long-term success of scientific innovation.

James Banks presented an overview of the ELSA study. Banks described how ELSA had intentionally diverted from exact comparability with HRS in efforts: (1) to establish comparability with existing data in England; (2) to capture institutional differences in England; and (3) to measure psycho-social dimensions that were lacking in HRS. Banks also introduced the innovations that ELSA has brought to scientific studies on aging, which HRS later adopted. Willis and Suzman conceded the learning effect of one study to the other, which brings continuous scientific progress.

Axel Boersch-Supan provided an overview of the SHARE study, describing SHARE's core elements and discussed the challenges associated with ex-ante harmonization, which include cultural and institutional differences, as well as language barriers. Boersch-Supan emphasized the importance of ex-post harmonization for comparative studies.

Next, aging surveys in Asia were introduced. Jinkook Lee introduced the KLoSA study and discussed the process of developing the KLoSA from the evaluation of core concepts and measures of the HRS, ELSA, and SHARE studies and applying those core concepts as relevant to the Korean context. The KLoSA is noted as a model for aging surveys in Asia.

John Strauss presented an overview of the IFLS study, which is not directly modeled after HRS, but includes the same core concepts of health and retirement of aging populations. Strauss highlighted the value of longitudinal study, which allows for investigation of natural experiments. For example, the impact of financial crisis can only be analyzed using longitudinal design, such that employed by the IFLS, as it allows examination over an extended time period before and after financial crisis.

Other than the KLoSA and IFLS studies, other Asian surveys (including CHARLS, HART, and Indian HRS) are currently in developmental stages. Yan Shen introduced the proposed research design of the CHARLS study and expressed the difficulty of sampling. Dararatt Anantuwonang provided the current state of the HART study and sought technical support. David Bloom presented his vision for launching the Indian HRS.

Suzman and Bloom noted the need for a field manual, describing how to set up an HRS-like study. For long-term success, Smith emphasized the importance of researcher-initiation and Boersch-Supan stressed local knowledge for studies. Strauss and Bloom raised the difficulty associated with sampling in Asia, particularly in China and India.

As an alternative to probability sampling, “Respondent Driven Sampling” methods were discussed. Pioneered by Douglas Heckathorn, Respondent Driven Sampling has been used to sample “hard-to-reach” populations, such as drug users and jazz singers. However, this sampling method was recommended only for sub-study or follow-up study, as the representativeness of population was identified to be fundamental to the surveys, and such representativeness is hard to establish using respondent driven sampling.

The last set of aging surveys discussed departed from the HRS. Somnath Chatterji introduced the SAGE study and noted that cross-country comparison is fundamental for WHO. For cross-country comparison, core questions creation is the key, and each country team adds additional questions that fit their particular interests. Steve Tollman provided an overview of INDEPTH, which shares a common core with SAGE. Tollman noted that the INDEPTH’s core is designed for routine data collection and encourage all sites to join the INDEPTH network.

Alberto Palloni presented an overview of the PREHCO and MHAS studies, and Brendan Whelan introduced the TILDA study. Palloni called attention to a need to continue the MHAS study and discussed new challenges with regard to health in Latin American, especially the combination of chronic and infectious diseases. Whelan noted that there are two aging studies in Ireland: the TILDA and a sub-study of SHARE. The value of collaboration among aging studies was highlighted in this discussion.

Suzman raised the critical importance of data sharing, and Smith stated that it has become a norm to release data to the public. Boersch-Supan and Palloni discussed the difficulties associated with the release of preliminary data; particularly complaints regarding errors that are due to insufficient time for data clean up. Willis pointed out that the virtue of early release is in its ability to detect problems sooner. Consensus emerged that early data release is important to scientific progress and helps to create political constituency.

V. KEY CONCEPTS AND COMPARABILITY

Health Domain

Lisa Berkman, James Smith, and Alberto Palloni discussed several important domains of health that population surveys should measure. First, Berkman identified the following domains: (1) self-reported health, (2) functional health, (3) mental health, (4) biomarkers, and (5) mortality. Berkman noted that the boundary between chronic versus infectious diseases, is not clear (e.g., HIV and TB are both chronic and infectious diseases), and that prevalence is important to detect through self-reporting.

Palloni warned that when using longitudinal study, correcting for surviving bias is critical and also emphasized comparing self-reports with ancillary data (i.e., health administrative data). All presenters recognized that early childhood health is an important determinant of later life chronic diseases, so it is important to capture early childhood health conditions, including malnutrition, and health histories.

Regarding functional health, Berkman discussed performance assessments, and cognitive testing, and Palloni discussed ADLs and IADLs. First, with regard to ADLs and IADLs, Palloni emphasized the importance of developing measures relevant to local context. Berkman noted that performance testing presents an excellent opportunity to measure functional health, with the development of newer tests- such as picking up a coin to measure fine motor skills- and recognized the importance of adoption to the local context. For example, where a chair is not used in everyday life, chair stands would not be a good performance test. Berkman also noted that cognitive testing in current surveys is heavily focused on verbal dimensions (e.g., verbal recall, memory, etc.) and suggested that verbal testing be supplemented with non-verbal tasks, such as drawing and mimicking animal behaviors, etc.

For mental health, HRS and other sister surveys have adopted symptom questions. Berkman suggested considering diagnosis questions instead of symptom questions. For example, diagnosis questions for alcoholism and psychiatric testing can be adopted.

Berkman introduced new devices used for biomarkers, such as a wristwatch for blood pressure reading and activity watches that measure sleep disruption. For biomarker collection, blood, urine, cheek swap, and saliva can be used, and recently, dried blood spots have been introduced, which is promising for population surveys. Anthropometry was recognized as important, and Palloni introduced knee length as a new anthropometry measure.

Berkman noted the importance of collecting information from death certificates and raised concerns about misclassification of reason for death as a problem.

Smith raised the issue of undiagnosed diseases, which is very common for underdeveloped countries. Palloni discussed the importance of symptoms: although symptoms are highly correlated with diagnosis, prevalence is only reported through health care utilization, and access to health care services brings biases to prevalence data.

After the presentation, conference participants engaged in open discussions on health, and key discussions that developed are as follows. First, Suzman raised loss of functioning over life-course as a critical issue that predicts disability, directly related to health care costs and institutionalization. Further research is needed for intervention or determinants of loss of functioning as well as improved measurement in terms of functional measures.

Wise raised the issue of linking health measures to predict future health care expenditures. Smith noted that health services utilization is the key that links health to health care expenditures, which vary by country and within country. Smith also noted that technology would be another influencer of future expenditures. Wise discussed the need to ask questions that would be useful to predict future health care costs, and Palloni urged consideration of the costs of caregivers and foregone costs, in any such estimation.

Priorities were discussed considering study interview times. Berkman argued that disease prevalence is more important than pain from an epidemiological standpoint. Strauss pointed out that when specific questions are asked, higher SES (socio-economic status) people tend to report higher prevalence due to diagnosis. Smith noted that asking diagnosis questions (i.e., "Has the doctor ever told you...?") does not take long and recommended supplementing diagnosis questions with biomarkers. Berkman noted that pain is the most culturally sensitive domain of health, and Banks noted that the specification of before and after medication, is critical to measuring pain.

Chatterji noted that it is important to distinguish health status from health risk and chronic disease. Smith discussed that new surveys in Asia present an opportunity to explore environmental risk factors, such as air and water pollution. Berkman noted that biomarkers can detect physical environments, such as tap water, soil, and dust, and Strauss cautioned that variation is great, depending on the time and day of the year.

Jinkook Lee presented a comparison of health measures (available in Appendix D1). Smith noted that, as comparisons are at conceptual level, comparability is overstated. Weir called for full disclosure of scales and skip patterns to determine comparability at the empirical level. Kaptyn noted that measurement errors exist, even for physical performance measures (e.g., grip strength varies with hand size), and Willis suggested a call for papers that examine measurement differences. Suzman called for an expert meeting to identify a common core.

Employment and Retirement

David Wise presented what he believes should be the key research questions in employment and retirement from policy perspectives. The key research areas that Wise identified are:

1. Determinants of labor force participation: Wealth is related to labor force participation, especially both private and public pensions, as well as disability payments. Particularly, the transition of defined contributions to defined benefits is an important consideration, but the current HRS does not provide any insights into this research question.
2. Retirement: Retirement and its relation to health and well being is an important topic to study. At the macro level, we should be able to estimate the consequences of working longer, in terms of its impact on GDP and other macro indicators. It is also important to note that productivity changes with age over time and over labor force participation, and that social participation is related to productivity.
3. Retirement resources: it is important to investigate pensions, personal savings, and their interactions. Needs for retirement resources vary depending on retirement timing and family situations, such as living arrangements. In addition, 401(k) type retirement vehicles are not available in other countries, so details on retirement plans relevant to each country are important.
4. Measurement issues: it is not simple to measure labor force participation and retirement. A series of questions may be necessary to capture the nature of labor force participation and retirement, as well as one's own assessment.
5. Data needs: may go beyond survey data. We need to explore what other information is available that can provide us with a full picture of retirement. Such information includes information about social security systems, which vary greatly across countries, and other country-specific information that is required to understand labor and retirement behaviors.
6. Future issues: include expected rising health care costs. We need to think about potential questions to ask in preparation for rising health care costs.

James Banks presented the following important conceptual issues in terms of employment and retirement:

1. Nature of employment: We should capture a complex picture of employment intensity and employment arrangements. Details might include: working hours, part/full-time appointment, demand on work, and self-employment or family work. Specific details as to the nature of employment may differ in less-developed countries.
2. Changes in employment: Longitudinal study allows researchers to identify changes over time, and by asking questions related to future plans, we will be able to determine whether such changes are anticipated or unexpected. Further investigation of anticipated plans, such as when and why one has diverted from such plan, will not only reveal workers' preferences, but also enable us to predict changes in employment.
3. Retirement from economic and non-economic perspectives: There is an interesting difference in perspective on retirement – some say that they are retired and still working, while others say they are not retired, but still, not working. Self-reported retirement statements often differ from actual employment status.
4. Retirement process: There is increasing interest and frequent discussion among scholars on the retirement process, but the retirement process has not been empirically studied. We need to explore retirement processes.
5. Pension: Pension receipts are distinguished from retirement, considering flexibility of arrangement. For example, some workers draw pensions early and continue to work. By further example, in Italy, there is no word for “retiree,” only for “drawing pension.”
6. Retirement resources: Knowing government rules on pensions is a prerequisite for researchers, but we need to realize that real people may not know about these rules. So, it is important to understand an individual's knowledge as well as their retirement plans. In order to model retirement resources, we need information about pensions, earnings history, and individual expectations, and in order to understand pensions and income dynamics, knowing about one person is not sufficient – we need to know, at least, information for both parties of a couple, or we might need to know about grandchildren, parents, etc, which links demands and preferences.

After the presentation, the conference participants discussed key concepts in employment and retirement, and Lee presented a comparison of aging surveys in the domain of employment and retirement (Appendix D2). The following is a summary of this discussion.

Suzman discussed important dimensions that are addressed in different studies. First is the relationship between work and cognitive functioning. With aging, cognitive functioning often declines, and thus, what happens to work when cognitive function declines? Second is the issue of work and stress, an exemplary work of which is Marmot's work on civil servants. Third, retirement processes have been studied only to a limited extent on peer pressure, while as to how decisions are made among couples (i.e. joint-decision-making), surprisingly little work has been done.

Smith proposed that more attention should be provided to retirement processes and employment histories, as well as changes in retirement expectations.

Berkman recognized that work flexibility is an important concept; however, to fully operationalize the concept, we need information, not only at the policy level, but also at the supervisor level.

Wise noted that there are a lot of issues that influence flexibility or other aspects of work, which are hard to get from a survey; for example, age discrimination. Wise recommended finding more information about the employer.

Smith identified stress and retirement as another important area to explore and noted that work environment is not sufficiently translated in surveys to capture stress associated with work. Work demand and control were originally included in surveys to capture such concepts.

Banks further discussed that employers face shifts from younger to older workers, and facing cohort difference in workers, we may need to know about wage options and a link between health, wage, and productivity.

Suzman noted that we have not seen the impact of poor health on retirement, except for in cases of acute health decline (such as heart attack, etc.). Especially, we have not seen the impact of slowly declining health on retirement, which is an important issue for employers.

Smith, Strauss, and Palloni discussed that pensions are not relevant in developing countries, particularly in rural areas, where people stay in the labor force until a much later age. Strauss described retirement in developing countries as slowing down work and intergenerational transfers taking over. Palloni noted that residential arrangements are often an outcome of retirement in developing countries, and endogeneity needs to be addressed.

Bloom further noted that how to finance consumption and morbidity is the key to a full understanding of retirement resources.

Tollman agreed that retirement resources in rural African households are captured in expenditures and noted the importance of reinforcement between state pensions and social networks.

Willis reflected development of the HRS. As the HRS population is heterogeneous, serious discussion took place as to whether to develop two sets of questionnaires, but then it was decided to branch out. Surveys in developing countries can take a similar approach, branching out for income purposes. For those countries that are developing rapidly, economic transition will occur within one's lifetime, so it is critical to capture such transition in the survey.

Whelan suggested that investigation of both employees and employers would provide additional insights, and Strauss brainstormed as to what information would be desired that might be gathered from firm-level surveys. Banks suggested information on firm-level policies and actual practices. Wise cautioned that firms also change their policies, and Weir also noted that response rates tend to be very low from employer surveys.

Income, Wealth and Consumption

Boersch-Supan, Willis, and Strauss presented key concepts in income, wealth, and consumption. Boersch-Supan outlined his talk around the following five issues, and his presentation is attached in Appendix D3. He raised the following issues for further discussion:

1. Income: Taxes and deductions are complicated and not homogeneous for countries, which makes comparative study on income more challenging.

2. Consumption: We need to capture free services, such as free health services and other products and services that are consumed without payment. Typical diary methods employed to measure consumption takes two to three hours, which is difficult to obtain.
3. Wealth: Measured stock of past savings is very useful, but difficult to obtain. Especially, measuring pension wealth is very difficult. It is also important to measure lifetime resources.
4. Measurement errors: are significant for income, wealth, and consumption.
 - Especially, some values are unknown; for example, the market value of real estate and defined benefits.
 - Some concepts are hard to understand; for example, net worth.
 - Item with non-responses can be reduced by brackets using CAPI, but some anchoring effects are found, as well as with the format of question matters.
 - In measuring unfunded pension wealth, administrative records can provide more accurate information than self-reported, estimated pension wealth.
 - Finally, the unit of measurement can be at individual, couple, and household levels.
5. Expectations: subjective probability accesses one's orientation for the future and has longitudinal value over the long term.

Willis noted that one of the important concepts developed from the HRS is "full wealth," and consumption is proportional to full wealth.

Strauss's discussion was centered on special problems faced in low-income countries. Specifically:

1. Income: Asking detailed questions on revenues and costs in one survey for one calendar year is not desirable, considering significant seasonal differences. Instead, Strauss suggested multiple interviews throughout the year. Strauss also noted that the most difficult data to collect is family work, due to seasonal labor variations and inherent limitations of retrospective data.
2. Assets: Finding information about one's assets at the individual level is very important, as some evidence is found that individual-level assets influence intra-household allocation.
3. Consumption: In rural areas, people are consuming what they produce. In fact, consumption data is easier to collect than income data in these regions, but it is important to collect information about market goods consumption as well as consumption of what's been produced. It should also be noted that there are various income sources, and some are non-agricultural. Strauss suggested the World Bank's Living Standard Survey as a practical compromise.

Lee presented information as to how income, assets, and consumption are measured in aging surveys (Appendix D4), and conference participants discussed measurement and data collection issues.

Smith highlighted the importance of accurate income measurements: for non-economists, it is important to recognize that one question on income won't capture all necessary data. There have been significant efforts to reduce question sets on income, but still capture the same concepts. The inclusion of all necessary sources of income is critical to correct measurement of income.

Banks further noted the importance of measuring all available resources of the household, distinguishing expenditures from consumption. The objective of what we are measuring from income and wealth is consumption flow. Strauss discussed the difficulty of measuring flow from housing in less-developed countries due to thin rental markets and bias in housing value estimations.

Kenny called for further discussion on data collection through multiple visits. Boersch-Supan discussed German surveys that use such strategy: twice a year, the German Survey collects consumption during a one-month period.

Willis described the CAMS, which attempts to capture some of the same concepts. Strauss shared his experience with the IFLS: on average, interviews take about six hours per household, and less than two hours for individuals. Refusal rates are higher in Jakarta than in rural areas: 75% versus 92%. Attrition is low; about 98% retention with token incentives due to small teams of experienced interviewers with supervisors. Tollman marked a contrast with the INDEPTH, which conducts a shorter visit, but more frequently.

Social Networks and Psychosocial Measures

Berkman presented key concepts in social networks, and her presentation is attached in Appendix D5. Berkman's presentation is summarized to the following three points:

1. Social networks: influence all diseases. Relative risk is much higher for those who are isolated. In social networks, substitution occurs, e.g., loss of a spouse can be made up for with a lot of friends, or vice versa. The real problem is complete isolation.
2. Emotional support: influences mortality. Social networks are not a strong predictor of mortality.
3. Social engagement: intellectual activity influences aging, and most people tend to obtain intellectual engagement from social interactions. Lack of social engagement is known to be a strong predictor of cognitive decline, while the reverse relationship exists, much less significantly.

Weir introduced social networks and psychosocial measures as new additions to the HRS, which are adopted from ELSA. The psychosocial measures include: positive and negative affect; extensive set of control; optimism versus pessimism; five domains of personality; religion; discrimination; wellbeing; and life events that would have emotional influences.

Lee provided an overview of social networks and psychosocial measures adopted in aging surveys, as shown in Appendix D6. The following discussion emerged related to social networks and psychosocial measures.

Kapteyn and Willis called for attention on interrelation between social networks and personality, and Berkman acknowledged endogeneity as a problem. Smith raised the issue of translating such concepts in different cultures and countries.

Banks noted that multiple measures are not employed, and some social activities are not captured in current surveys. Berkman noted further that frequency of social participation varies by culture, and may have unique meanings in different cultures, for example, spirituality. Palloni noted that even within countries, types of social activities vary by social class.

Willis recognized that preference also determines social support sought, but it is also important to measure constraints, such as proximity. Regarding the concept of social engagement, there might be stock and flow. Palloni noted gender difference in seeking out social support in Latin America: for example after widowhood, females tend to replace social networks more than males.

Berkman discussed the cost of social networks – care-giving burdens. Care giving has been found to be positively associated with cellular aging. Nicholas Christakis' work on care giving as a risk factor is a good example.

VI. INNOVATIONS

Innovations recently brought to aging surveys were introduced and the implications for aging surveys were discussed. Innovations include: (1) Developing an information resource system for harmonized aging surveys; (2) biomarkers; (3) vignettes; (4) life history; (5) interventions; and (6) the Internet.

Information Resource System for Harmonized Aging Surveys

Kaptyen, Lee, and Weerman presented current progress in developing information resource systems for harmonized aging surveys, and their presentation is attached in Appendix E1.

Kapteyn, Lee, and Weerman's proposal received a good score from NIH Scientific Review Committee, and the project is set to begin once the grant is awarded. The conference participants were excited about the outcome of the proposed information resource system and discussed implementation. The following are suggestions from the participants:

1. Inclusion in the resource system: question flow, definition of key concepts
2. Availability of information: some OECD data is not public, which include key contextual information
3. Expansion: There were significant interests among the participants to expand the proposed information resource system to include additional existing aging surveys, such as PREHCO, INDEPTH, and SAGE, as well as new emerging surveys, such as CHARLS.

Biomarkers

Berkman, Banks, and Weir discussed biomarkers. First, Berkman discussed why HRS-type population surveys might want to invest in biomarkers:

1. Biomarkers measure exposure more reliably than self-reporting, and from the public health perspective, social exposure to disease is very interesting.
2. Biomarkers help us to understand pathways, not only biological pathways, but also social pathways.
3. Once we understand both social and biological pathways, we can intervene the pathways.

Banks raised the question as to where variations of biomarkers come from in addition to methods of collecting biomarkers. Banks also raised the idea of using and analyzing biomarkers as the key to providing validity to self-reporting measures of health and the validity of cross-national studies as well. Banks further noted that exchange blood samples to labs may be necessary in order to capture lab differences, and that not only the collection protocol, but also the processing protocol, must be documented and evaluated.

Weir's discussion centered on operationalizing biomarker collection in a population survey. Weir recognized that a gradient exists in biomarker collection, and that the HRS has taken a different approach from the ELSA due to costs. For example, an HRS diabetes study collected biomarker data via a mail survey and then stored the sample in a depository for future use, instead of processing the blood.

Lee summarized biomarker collection in current aging surveys (As shown in Appendix E2). The following is a summary of the discussion on biomarkers:

1. Informed consent: For biomarker collection, ELSA obtains separate, informed consents for blood samples and DNA collection. England would not allow DNA samples to go outside of the country. Suzman reflected on the launch of the ELSA biomarker collection and identified the needs for institutional collaboration.
2. Biomarker collection in developing countries: Palloni discussed that co-existence of infectious diseases and chronic conditions can be easily detected in blood tests, and therefore, biomarker collection in developing countries is important. Courses of disease pathway may also differ depending on early exposure, which can be detected through biomarkers as well. Tollman noted that Africa would be sensitive to sharing blood samples.
3. Recommendation for SHARE: Boersch-Supan sought recommendations for SHARE, and Berkman recommended collecting dry blood spots, at least three spots, and then storing them, without processing. A high response rate was noted for the HRS and the ELSA studies. Kenny recommended urine collection, and Suzman noted that medicine types ingested could be detected from urine tests.
4. Costs and feedback: The cost of nurse visits was about the same as the CAPI survey, using interviewers for ELSA, although the time taken for nurse visits was typically shorter than the CAPI interview. Some diseases are discovered and then the respondents are notified; typically five to six cases during a six-month time period in the case of the ELSA

study. Also, if some abnormality is observed, a nurse informs the respondents on the spot.

5. Lab variations: Due to lab variations, reliability and standardization of measurement are a critical issues. If errors are known, they can be adjusted for statistically. Bloom noted that, other than lab variations, what respondents eat before the test, and the time of the day the blood or urine is drawn, also influences lab results.

Vignettes

Chatterji and Kapteyn discussed vignettes, and their presentations are found in Appendices E3 and E4, respectively. Chatterji discussed health as a multi-dimensional experience, which triggers multiple questions. Examining cross-national studies, biases are found, and as expectation differs, anchoring effect occurs in self-reporting. To capture such anchoring effects, WHO developed anchoring vignettes. Anchoring effect is not only a cross-country issue, but it matters also within countries. However, vignettes do not solve all problems: vignettes are cognitively challenging as respondents are asked to think about a hypothetical person's condition.

Thus, we need to improve: (1) vignette scenarios to make them easier to understand; (2) analyses, when sample size is large, analysis is difficult, and; (3) administration. Currently, there is no evidence that vignettes are biased by educational level.

Kaptyen presented an example of using vignettes to adjust for anchoring effect. He studied work disability and found that work disability is more prevalent in the Netherlands than in the U.S. Using anchoring, it was found that perception of pain is more severe in the Netherlands than in the U.S., and it could be speculated that since many people draw disability benefits in the Netherlands, the Dutch have a different framework than Americans. Suzman noted that there has only been limited research done using vignettes.

Boersch-Supan cautioned against respondent burden associated with vignettes, as some people like them and others hate them. He also noted that mode matters: in an Internet environment, vignettes are powerful, but in paper-and-pencil survey, it is hard to communicate vignettes with respondents. One study may want to employ multiple measures. Whelan noted that sufficient pre-test is a key to use of vignettes.

Life History

Banks and Weerman demonstrated how life history is collected in the ELSA. Banks illustrated how the life history study was developed: initial thoughts were to collect (1) early life – formative year's history; and (2) events in life course. It is important to note that some respondents are interviewed starting from age 70, so there is a dis-equilibrium from the beginning, and that some information has already been collected, such as education and earning history. Life history is taken using a memory retrieval approach, using biographical recall across the dimensions, setting up a life-grid, or event calendar. ELSA decided to focus on age 10, traumatic events, and menopause, for simplicity. ELSA has conducted three pilot tests, and Banks recognized that only a limited amount of information could be collected in life history interviews.

Participant discussions on life history can be summarized as follows:

1. Specific questions: it was noted that asking specific questions (i.e., specific questions at specific ages) is very important in order to obtain useful information.
2. Questions about health: ELSA currently does not include health on the grid, but many conference participants suggested that health histories are key questions to ask in terms of life history. While on-set of disease and acute health can be captured, collecting health histories takes about 45-minutes at pre-test.
3. Operational issues: Some information was included as pre-load, but not others. Including pre-load is a programming question, and there is a privacy issue. Smith recommended that other surveys should seek help from ELSA and Weerman to save time and efforts. Willis recommended conducting life history early (not in baseline) and noted that multiple observations may be necessary, so we should not seek a once-and-for-all conversation.

Interventions/Experiments

Weir and Kenny discussed intervention studies as a part of population surveys. Weir and Kenny's presentation can be found in Appendices E5 and E6. First, Weir presented how HRS allowed policy innovation analysis, namely analysis of Medicare Part D.

Kenny introduced the experiments that TILDA is planning, funded by INTEL. The research goals include helping to achieve independent living and detecting early behavioral markers of disease. TILDA will use health centers at ten locations nationwide and will take advantage of technological innovations, such as footprint, using EMG and EGG, sensors pasted on skin and behind the ear, and examination of the sensory system.

Smith led the discussion, noting that in most cases, it is unknown what will happen in the future. Therefore, flexibility is important, in order to allow investigation when some unknown events occur, e.g., financial crises, Medicare D, and so forth. Banks noted that reforms are often planned, so researchers can plan ahead as well. Willis cautioned that small sample size is a concern, and to overcome such issue, geo-coded data may be used, in which researchers can merge data on disasters and analyze them afterwards. Strauss stated that even with a sub-sample, IFS could analyze the impact of financial crises in this manner.

Internet

Kaptyen and Weerman presented use of the Internet for data collection, and their presentation is attached in Appendix E7. Kapteyn also discussed an alternative measure of well-being, which relies on episodes, and the possibility of combining this measure with vignettes. Kenny noted the Internet diagnostics used with the INTEL study.

VII. CONCLUDING DISCUSSIONS

Willis discussed family and intergenerational transfers as important topics in Asian countries. Considering the demographic shift of population aging and low fertility rate, availability of kin is a very important issue, creating significant public policy questions. Suzman noted that there are not enough publications on this topic and that collaboration and standardization will impact funding decisions as well as allow examination of important institutional changes.

All conference attendees agreed as to the value of harmonization of aging surveys and that the continued collaboration to harmonize the surveys and ultimately working toward cross-national studies on aging would be beneficial. Developing information resources can help principal investigators make informed choices in survey development; the need for a field manual was also recognized.

In order to invigorate productive collaboration on cross-national studies, it was recommended that priorities be identified and that researchers be encouraged to collaborate on priority areas. Identification of key research priorities will help lead to effective collaboration among aging researchers.

Further, the importance of regional level collaborations was emphasized. With emerging surveys in Asia, further pursuit of regional collaboration was recommended to examine the impacts of policy, culture, and institutions on health and retirement. Other venues were also explored, such as follow-up meetings and joint publications, and more deliberation was commended.