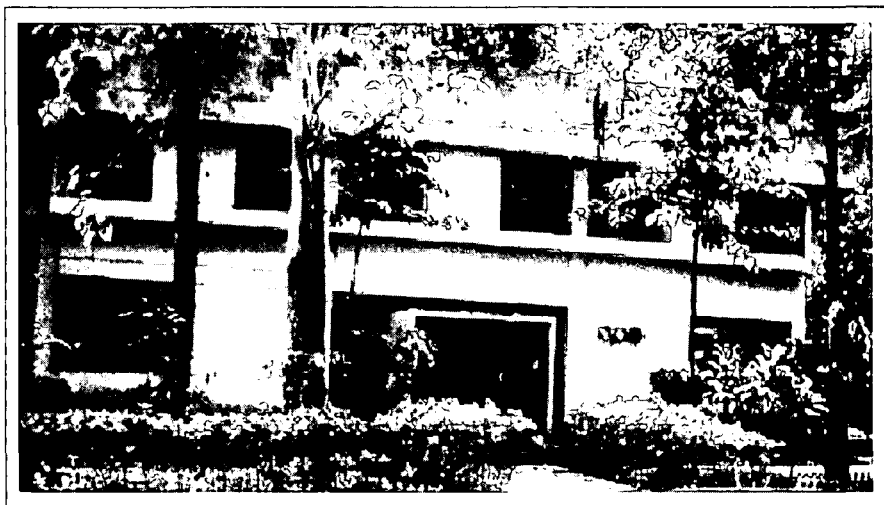


SPOTLIGHT

THE USC OFFICE OF POPULATION STUDIES FOUNDATION, INC.

ALAN B. FERANIL

The USC Office of Population Studies Foundation Inc. is one of the country's leading research centers conducting studies on population, health and nutrition. Based in Cebu City, the office continues to live up to its track record and carry on the legacy of its founder the late, Fr. Wilhelm Flieger, SVD, an internationally renowned German sociologist/demographer.



HISTORY

The office grew out of demographic activities on a small scale, which Fr. Flieger carried over to the University of San Carlos (USC) from the Population Institute of the University of the Philippines where he served as

a visiting professor for two years (1968-1970). At the request of Fr. Rudolf Rahmann, SVD, then president of the University of San Carlos who wished that demographic research activities be formalized within the university, the name "Office for Population Studies" (OPS) was adopted and one classroom in the USC Girls' High School was allocated for the office and its activities. The OPS occupied the fourth floor of the USC Girls High School for its operations from 1972 to April 1979 (Flieger, 1980).

During its first years of existence, the OPS was part of the Department of Sociology and Anthropology of the University of San Carlos with Fr. Flieger concurrently serving as the director of the office and chairman of the department. The department offered the most appropriate setting in which demographic research activities could be started and developed (Flieger, 1980).

The office experienced its first expansion when Fr. Flieger, upon the request of the National Census and Statistics Office (NCSO) assumed the position as director for the Central and Eastern Visayas Sample Vital Registration System Project. For the duration of the project (1971-1975), the NCSO was attached to OPS, which was staffed with personnel from USC as well as NCSO. Ms. Brigida Koppin of USC was in charge of this office. The activities of the Sample Vital Registration Project attracted Sociology-Anthropology graduates of the university into its operations. A second expansion of the OPS began in 1975 when OPS entered into a formal agreement with the Commission on Population (POPCOM) to undertake annual fertility surveys in various provinces and regions of the country to monitor the trend of the country's birth rate and the impact of the government's family planning program. These surveys were done in cooperation with the Population Institute of the University of the Philippines (UPPI) headed by Dr. Mercedes Concepcion, Research Institute for Mindanao Culture (RIMCU) of Xavier University in Cagayan de Oro City headed by Fr. Francis Madigan and the Davao Social Action Information Center headed by Dr. Robert Hackenberg. The Office conducted the Seven Provinces Survey covering Negros Oriental and Capiz from 1975-1977 followed by the 1977, 1978 1979, 1980 Area Fertility Surveys covering Regions V and VI.

With its expanding activities, the OPS needed a larger staff who could go into the field for months. Hence, OPS had to develop a staff that could devote full time to field research activities without being tied down with classroom activities. Because of the special staff needed and the growing complexities of administering the office, proceedings to separate the office from the Department of Sociology-Anthropology were started in 1977 and completed in December of the same year when the Board of Trustees of the University of San Carlos in its annual meeting formalized the existence of the office as an extension unit of the university and changed its name from Office for Population Studies to Office of Population Studies. Until that time, the OPS had existed by virtue of an oral agreement between Fr. Rahmann, SVD and the chairman of the Department of Sociology-Anthropology (Flieger, 1980).

In November 23, 1979, the University of San Carlos inaugurated the Office of Population Studies in Talamban Campus of the University. The said building (now named the Fr. Wilhelm Flieger Building) was built with contributions from donors from the Federal Republic of Germany, particularly friends of Fr. Flieger and the support from Fr. Dr. Gerhard Huth, SVD of the SVD Mission Procure in San Augustine. The equipment and computers were bought using funds from the Deutscher Missionsrat (German Mission Council), OPS funds and the Generalate of the Society of the Divine Word in Rome. The library collections were from the Population Council in New York, the POPLAB program of the University of North Carolina, the East West Center Population Institute, Tufts University, CICRED, International Union for the Scientific Study of Population, US Agency for International Development, US Bureau of the Census and ESCAP (Flieger, 1980). Additional collections included journals of professional associations like Population Association of America, the Philippine Population Association and from other local and international publications.

With the untimely death of Fr. Flieger in December 18, 1999, the university felt it best to convert the office into a foundation. In January 11, 2005, the Office of Population Studies was granted its certificate of incorporation by the Securities and Exchange Commission with its new name: USC Office of Population Studies Foundation, Inc.

DIRECTORSHIP

Fr. Flieger, its founder, was the director from 1971 to his untimely death in 1999. Fr. Flieger's death left a vacuum, which was temporarily filled by Fr. Francisco Estepa, then the President of the University of San Carlos. Eventually, the directorship was transferred to the senior research associates. Dr. Socorro Gultiano served two terms (from 2000-2002, 2004-2008) while Ms. Josephine Avila served as the Director during the 2002-2004. Dr. Alan Feranil, who joined the foundation formally in 2006, succeeded Dr. Gultiano as the director in 2008.

STAFF DEVELOPMENT

With Fr. Flieger serving as the concurrent director of OPS and the chair of the Department of Sociology and Anthropology (1971-1977), graduates of the department served as the pool from which the OPS drew its personnel while OPS served as a medium to obtain study and training grants for the department's faculty and students. During this period, 1971-1977, OPS paved the way for study grants for MA studies for USC students and faculty members of the department, special training courses in Manila or Honolulu involving faculty members of the department (Flieger, 1980).

Over the years, the OPS sent research associates for training. Research associates pursued graduate studies in Manila, the United States, the Netherlands and Australia. Several others eventually followed for summer seminars and research internships at the East West Center and the Johns Hopkins University. However, not all who obtained training overseas returned to stay at OPS. OPS had its share of 'brain drain' during the first two decades of its existence. Even after the demise of Fr. Flieger, OPS staff had opportunities to attend short-term as well as degree programs locally and abroad (UPPI, De La Salle University, University of North Carolina [UNC] at Chapel Hill, Mahidol University, and the Australian National University [ANU] in Canberra). A grant from the Packard Foundation also helped support several short-term training programs of OPS staff.

OPS staff also pursued hands-on training on data processing and analysis at the UNC in Chapel Hill, geographic information systems (GIS) training at the International Institute for Geo-information Science and Earth Observation (ITC) at the University of Professional Education of

Larenstein in the Netherlands, and special courses on theory and research methodology at the ANU.

As of 2009, the office has a pool of well-trained researchers. There are four PhDs: two in demography from ANU and two from UNC in nutrition and nutrition epidemiology; and one with PhD units in anthropology from the University of San Carlos. The remaining research associates who make up the OPS team have master's degrees in: health social science from the De la Salle University; population and reproductive health research from Mahidol University, demography from UPPI, population studies from ANU and masters units in statistics from UP Diliman. The office also has a pool of research affiliates from various universities who work with OPS on specific projects.

LINKAGES

Owing to Fr. Flieger's world-renowned contributions to demography, OPS was able to establish national and international linkages, which the office maintains up to this day. Among these are his works in collaboration with Nathan Keyfitz, his mentor in the University of Chicago (where he obtained his doctoral degree in sociology): *World and Population: An Analysis of Vital Data* (1968) and its sequel *World Population Growth and Aging: Demographic Trends in the Late Twentieth Century* (1990) and *Population: Facts and Methods of Demography* (1971). With Fr. Flieger at the helm, OPS became an institutional member of the erstwhile Comite International de Cooperation Dans Les Recherches Nationales en Demographie (CICRED), an international network of demographers linked with Institut National d'Etudes Demographiques (INED) based in Paris. Because of his ties with Nathan Keyfitz, Fr. Flieger forged ties with the International Institute for Applied Systems Analysis (IIASA) where he and Keyfitz did a number of statistical demographic works.

Eventually, OPS linkages expanded to other universities in other countries. Earlier collaboration with Johns Hopkins University led to the evaluation of child survival action programs in the Philippines (1987). With the track record known globally, the OPS has continually been invited to join international seminars organized by the Meta-Center for Population Research, particularly the Vienna Institute of Demography,

College of Population Studies of Chulalongkorn University in Thailand and the National University of Singapore. The office also worked with the Waikato University in New Zealand for a study funded by FAO and CIRCED which led to the publication of the book "Population Dynamics, Land Availability and Adapting Land Tenure Systems: Philippines" (Gultiano et al., 2003).

The OPS has had a long collaboration with the Carolina Population Center of the University of North Carolina at Chapel Hill (CPC-UNC), one of its major collaborators. Since the implementation of the Cebu Longitudinal Health and Nutrition Survey (CLHNS), jointly initiated by OPS and CPC-UNC in 1983, hands-on training of staff and collaborative research still continue. Other collaborators from the Northwestern University and Johns Hopkins University who have used the CLHNS data for their graduate or postgraduate work have also continued to collaborate with OPS on several research activities. Because of its track record, the CLHNS recently joined four other prestigious birth cohort studies from low- and middle-income countries (Pelotas Birth Cohort [Brazil], the Institute of Nutrition of Central America and Panama Nutrition Trial Cohort [Guatemala], the New Delhi Birth Cohort [India] and the Birth-to-Twenty [South Africa]) to form the Consortium on Health Orientated Research in Transitional Societies (COHORTS) (Adair et al., 2009).

On the local front, the OPS has strong ties with the National Statistics Office (NSO) for various census data analysis projects, the Department of Environment and Natural Resources (DENR) for the watershed / protected areas studies, and the Department of Health (DOH) with the projects on diarrheal diseases and acute respiratory infections. In the development of teaching modules on population and development for Catholic schools, the OPS linked with the Sacred Heart School, St. Joseph's Academy of Mandaue City, Fr. Saturnino Urios University, Divine Word College, Legaspi High School, Aquinas University of Legaspi - High School, Dominican School of Camalig, University of San Carlos North and South Campuses, RIMCU of Xavier University, Institute for Reproductive Health Philippines Foundation, Ateneo de Manila University, San Carlos Seminary in Cebu and the Philippine Center for Population and Development (PCPD). The office still continues to collaborate with other major institutes in the country like the UPPI, the RIMCU of Xavier University,

Philippine Institute for Development Studies (PIDS), and UP Los Baños on certain surveys that involve representations from Luzon, Visayas and Mindanao.

TRAINING / TEACHING

Although the OPS started as part of the Department of Sociology and Anthropology of the University of San Carlos because of the fact that Fr. Flieger headed both offices, its separation from the department in 1977 did not sever its ties with the latter. Staff members of OPS continue to teach in population-related and other sociology courses in the department when requested to do so. A teaching connection was also established later with the Department of Economics (Flieger, 1980). Similarly, the College of Education and College of Architecture and Fine Arts has also tapped OPS staff as lecturers or advisers to graduate students.

The OPS has been instrumental in bringing special training courses to the university. Under the sponsorship of the then Ministry of Education and Culture and in cooperation with the Department of Sociology and Anthropology and the Department of Graduate Anthropology, a special course in Population and Social Change for college teachers from the Visayas and Mindanao was conducted in the university in 1977. In 1978-1979, the OPS was also involved, together with other units of the university, in the Institutional Development Program of the Population Center Foundation of the Philippines. Under this scheme, the university trained social science teachers from all over the country in family planning-related research (Flieger, 1980).

A similar initiative was pursued two decades later when the OPS, under the leadership of Dr. Gultiano, coordinated a series of symposia on population and development in Visayas and Mindanao with the support of the PCPD. This initiative led to the writing of teaching modules on population and development and human sexuality and responsible parenthood for Catholic elementary, high school and college teachers.

With OPS serving as the local conduit for overseas students using CLHNS data, the office provides technical assistance and supervision of field survey operations of graduate and post-graduate students. These students are mainly from the collaborating American institutions like UNC at Chapel Hill, Johns Hopkins University and Northwestern University.

MAJOR ACTIVITIES

At present the OPS focuses its efforts on two major research tracks: socioeconomic and demographic studies and health and nutrition researches. The first includes census data analysis, formal demography (life tables) and socio demographic studies on fertility, migration studies, GIS applications, internet literacy studies, micro finance and poverty alleviation studies. The second focuses on projects with health and nutrition dimensions including family planning, mother and child health and nutrition, child survival and early child development.

A. Socio Economic and Demographic Thrusts

The OPS projects that involve social, economic and demographic analysis and the use of certain technologies include several endeavors since the office started.

In 1971- 1975, the National Census and Statistics Office tapped OPS for the National Sample Vital Registration for Central and Eastern Visayas. In 1973-1976, OPS was involved in the analysis of census data for the generation of estimates of internal migration in the Philippines.

The generation of mortality estimates for the country in coordination with the NCSO and the Population Center Foundation also started in 1973 that led to several publications. The legacy of generating mortality estimates continued in the later years 1979-1982 and 1994. In 1980, the OPS initiated the assessment of the reliability of existing demographic measures, particularly mortality data. The result of this endeavor is the first set of life tables (using the 1970 census) for the country and for each of the provinces in the book, *On the Road to Longevity* (1981) which is one of the landmark contributions of OPS to the field of demography in the Philippines. This initiative was followed up by Fr. Fliieger in collaboration with Dr. Josefina Cabigon of the Population Institute of the University of the Philippines in 1994 with the publication of the *Life Table Estimates for the Philippines, Its Regions, Provinces by Sex, 1970 1980 1990* as Monograph No. 5 for the Health Finance Development Project of the Department of Health. A sequel was made in 1999 with the *1995 Gender Specific Life Tables for the Philippines, Its Regions and Provinces*. These life tables serve as key references for the academic, public policy and health sectors.

In 1975-1977 the OPS was involved in a series of annual fertility and family planning surveys in Western Visayas and Bicol. A demographic and economic inventory of the Lusaran (Cebu) Watershed Area was also conducted in 1977 by the OPS for the Lusaran Resettlement Project Inter-agency Committee. OPS was called in to conduct a census and an inventory of the people living in the area, their characteristics, possessions and living conditions which were important in laying down plans for reforestation of the watershed area. In September 1978, the OPS was contracted by the National Center for Health Statistics, an agency of the Department of Health, Education and Welfare of the United States to conduct multiplicity surveys in Metropolitan Cebu and the province of Cebu. The following year, OPS joined a group of researchers in a series of research projects on economic and social impact and women in development. These projects (Impact of Population Planning on Selected SES Areas of Concern) were funded by the Philippine Center for Economic Development, an affiliate of the School of Economics of the University of the Philippines (Flieger, 1980).

In 1983, the OPS was also involved in the conduct of the National Demographic Survey funded by the POPCOM, and in collaboration with the UPPI and RIMCU of Xavier University.

In 1980-1982 the Office was involved in the Water Resources Improvement Project in Cebu Province in coordination with the Water Resource Center of the University of San Carlos and the census and survey of seven agro forestry areas in Region VII in collaboration with the National Economic and Development Authority (NEDA) in 1981-1982. These were followed by a re-survey of 12 rehabilitated water wells and their user populations in Cebu Province in 1984-1985 funded by Asia Foundation and in collaboration with the Water Resources Unit of the University of San Carlos.

The 1990s also witnessed the expansion of OPS to other fields of research. In 1991, the OPS conducted the first assessment of socio-economic changes among Upland Farmers Exposed to the Cebu Upland Project between 1987 and 1990.

In 1994, the OPS first published the *Cebu: A Demographic and Socio-economic Profile Based on the 1990 Census* funded by the UNFPA-NSO Project. This book provided basic demographic, socioeconomic information on municipalities in Cebu, and was a landmark achievement

that Fr. Flieger initiated. After Fr. Flieger's death, an updated version of the Cebu Fact Book was also published in 2004 with funding from the Japan International Cooperation Agency (JICA), in cooperation with the Cebu Socio Economic Empowerment and Development (SEED) Project. A team headed by Dr. Antonio Zosa, Dr. Victoria Zosa, Dr. Socorro Gultiano and Daisy Cusi collaborated in continuing Fr. Flieger's legacy. These fact books provided crucial information on the municipalities and barangays in Cebu province and have been used by academe, research organizations, government line agencies, and private companies for their respective needs.

In 1999, the OPS published the book *Mountains of Cebu and their Inhabitants: Measurements and Estimates* funded by the East-West Center. This publication used geographic information systems to re-measure the mountainous portions of Cebu province and re-estimate the population occupying them in 1980.

The OPS collaborated with the University of Waikato, New Zealand and Leyte State University for a project on Population Dynamics, Land Availability and Changing Land Systems in 2000. This collaboration led to the publications of a book *Population Dynamics, Land Availability and Adapting Land Tenure Systems: Philippines, A Case Study* in 2003 for FAO and CICRED Publications.

In 2006, the OPS embarked on a project focused on the development of teaching modules on population and development, human sexuality and responsible parenthood for Catholic schools. This initiative, funded by the PCPD involved elementary, high school and college teachers from selected schools in Bicol, Cebu and Butuan to develop teaching modules for Catholic schools. This initiative was in response to the need for such training materials expressed by participants in the series of symposia on population and development coordinated in different parts of the country.

In 2008, the OPS worked with the Scalabrini Migration Center on the Migrant Associations and Philippine Institutions for Development (MAPID) Project covering the Visayas.

Recently, OPS was involved in several data collection surveys for Innovation for Poverty Alleviation, an NGO based in the United States. OPS has also been tapped to oversee and conduct the data collection and analysis (in collaboration with the PIDS, Department of Economics of the University of the Philippines at Los Baños) for the World Bank's Evaluation

of the Gearing Up Internet Literacy and Access to Students Program of the Ayala Foundation.

B. Health and Nutrition Thrusts

The office's pursuit of health and nutrition research stretched through several decades. The health and nutrition perspective started with the University of North Carolina at Chapel Hill in the early 80s. Interspersed are some local and foreign projects with collaborators that also examine the health and nutrition perspective.

a. The Cebu Longitudinal Health and Nutrition Survey

The engagement with health and nutrition research started in 1983 when OPS collaborated with the University of North Carolina at Chapel Hill and the Nutrition Center of the Philippines on the Cebu Longitudinal Health and Nutrition Survey (CLHNS), which is now one of the longest running cohort studies in Asia. The project concept started in the early 1980s when several international feeding companies approached Dr. Barry Popkin, a noted nutrition expert, to develop a long-term research project to explore issues related to the controversy surrounding the determinants and consequence of infant feeding. Dr. Popkin formed a research group which included economists John Akin and David Guilkey from CPC-UNC, demographer Fr. Wilhelm Flieger, from OPS-USC and Dr. Florentino Solon, Director of the Nutrition Center of the Philippines. Metro Cebu was chosen as the site of the study because it offered the environmental and socio-economic diversity needed for the study (Adair and Popkin, 2001)

Although the CLHNS was originally intended as a two-year follow up of infants, subsequent surveys on these cohorts of mothers and children were pursued with new objectives. Thus, the project had numerous sources of funding support including international organizations, research foundations, industry and the US National Institutes of Health.

The first follow up of the mother and child pairs was undertaken in 1991-1992, when the children were eight years old. Headed by Dr. Linda Adair of CPC and the senior staff at OPS, the main objective of the survey was to follow the growth, intellectual development and early schooling status of the offspring. Subsequent surveys were conducted in 1994-1995,

1998-1999, 2002 and 2005, with each survey looking at a different perspective of the mother and child's development. The 1994-1995 survey focused on women's status, family planning use and labor force participation of the mothers and the relationship between school achievement and nutritional status of children. The 1998-1999 survey focused on adolescent reproductive health and sexual behavior. The more recent 2002 and 2005 survey rounds examined how childhood health and nutritional status affect educational attainment, work patterns, and wages of young adults, and the 2005 survey added a focus on the development of obesity and chronic disease risk factors. In 2007, a follow up survey was conducted to gather information on the demography and economics of aging. In 2008, another three-year follow-up of the cohort of mother-child pair was started and included the grandchildren to examine intergenerational influences on infant nutrition and growth. Although the 2008 study focused on the mothers, information on their daughters was also collected. A subsequent tracking survey for the cohort of male children was initiated in 2009. Although each survey round had different objectives, the core/basic modules collected in earlier rounds were retained. Specialized modules addressing the different objectives of each round were added and build on the large information database of the CLHNS.

More than 125 scholarly works based on the CLHNS and written by current collaborators have been published in demography, economics, epidemiology, biomedical, human biology, nutrition, public health, and women studies journals (a complete list of publications is available on the CLHNS website). Additional papers have been published by independent researchers who accessed the data from the CLHNS website. The CLHNS has provided evidence on the effects on birth outcomes, infant feeding, growth and health, developmental origins of young adult health risk, child development, schooling and young adult work status and reproductive health and sexual behavior. In addition, the CLHNS also provided evidence for studies on health and nutrition, genetics, urbanization, work status and earnings and urbanization. The CLHNS also focused on studies on domestic violence, psychological health, unintended pregnancies and transition to adulthood. Because of the unique advantage of longitudinal data in the CLHNS, a number of

methodological issues were explored focusing on the effect of endogeneity and use of structured questionnaires versus in-depth interviews.

CLHNS studies have been used in the continuing education programs of the Professional Society of Pediatrics, Professional Society of Obstetrics and Gynecology and Philippine Society of Nutrition and Dietetics (Adair and Popkin, 2001). Likewise, the CLHNS is still being used as a rich data source for masters thesis, doctoral dissertations, and academic publications particularly in well-known universities.

Results of the CLHNS have been disseminated to public policy makers, and local and international fora. According to Adair and Popkin (2001), the first World Bank strategy on health financing and environmental health policy used findings drawn from the Cebu study. Likewise, UNICEF's policy on the ingestion of breast milk substitutes during infancy and the Asian Development Bank's programs on early child health development have used findings from the CLHNS.

Because of its wealth of information and high quality research outputs, the CLHNS is part of the COHORTS study group composed of investigators from five sites namely Brazil, Cebu, Guatemala, India and South Africa. The study group is funded by Wellcome Trust to encourage the presentation of collaborative research in Developmental Origins of Health and Disease (DOHAD) International Congresses, conduct of meetings and presentation of papers. As such the CLHNS is recognized as one of the high quality birth cohorts studies in developing countries (Adair et al., 2009).

b. Other health-related studies

In 1984, the Office conducted the Natural Family Planning Survey in Bicol and Visayas funded by the Population Council of New York. OPS also ventured into other health research funded by the Philippine Government with the Evaluation of Key Child Survival Activities in Metro Cebu (1987) in collaboration with the Johns Hopkins University School of Public Health, and the Household Management of Diarrhea and Acute Respiratory Infection among Young children in Metropolitan Cebu (1997). In 1990, the office conducted an assessment of the health situation of the urban poor in Cebu City in preparation for the "Urban Health and Nutrition Project (UHNP)" of DOH. In addition, OPS was part of the

three-country study on the Patterns of Family Planning Use and Women's Work (1998), which was funded by Family Health International.

OPS also conducted the Multi-Indicator Cluster Survey in 1997 and subsequently in 1999 to collect specific maternal and child health indicators for Cebu Province. The Local Government Unit Performance Program, a USAID initiative, funded these two studies.

With its known track record for cohort studies, the OPS was tapped in 2000 to conduct the Evaluation Study of the Early Childhood Development Project of the government. Funded by the World Bank, Asian Development Bank and the Philippine Government, the project examined the impact of early childhood development programs on the health, nutritional and cognitive and psychosocial development of pre-school children in selected regions of the country. This project initially ran for a period of four years covering the baseline study in 2001; follow up surveys in 2002 and 2003. A subsequent follow up was undertaken on its fourth year funded by the University of Pennsylvania and the US National Institutes of Health- Fogarty International. The OPS reputation for its work on early child development led to a contract from UNICEF in 2008 to coordinate the pilot testing of child development outcome instruments for household surveys in collaboration with researchers from McMaster University (Canada) and Telethon Institute for Child Health Research (Australia), Demographic Research and Development Foundation (DRDF) and the RIMCU Xavier University.

Today, OPS continues its collaboration with partners from US-based universities who work on the CLHNS cohort and provide logistic and technical support to graduate students and new graduates who do their field work in Cebu using the CLHNS data and sample. Current works on the CLHNS have focused on collecting information and generating papers for publications. Data collection involves tracking the birth cohort, collecting data to examine intergenerational influences on infant and nutrition growth, and measuring sex, contraception and mood among young adults. Writing and analysis of CLHNS have more recently focused on cardiovascular risk factor clustering among women and offspring, relating multiple dimensions of stress to cardiovascular risks and modeling the development of adult risk factors with foreign collaborators. By doing these

and scouting for other opportunities, the OPS family seeks to carry on the name and the legacy of quality work left by its founder. Fr. Wilhelm Flieger.

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REFERENCES

- Adair, L.S., Martorell, R., Stein, A.D., Hallal, P.C., Sachdev, H.S., Prabhakaran, D. Wills, A.K., Norris, S.A., Dahly, D.L., Lee, N.R., & Victora, C.G. for the COHORTS group, (2009). Size at birth, weight gain in infancy and childhood, and adult blood pressure in 5 low- and middle-income cohorts: when does weight gain matter? *American Journal of Clinical Nutrition*, 89: 1-10.
- Adair, L.S., & Popkin, B. (2001). The Cebu longitudinal health and nutrition survey: History and major contributions of the project. *Philippine Quarterly of Culture and Society*, 29: 5-37.
- Flieger, W. (1980). The Office of Population Studies of the University of San Carlos. *University Bulletin* (Supplement), December 1979-January 1980: 3-6.
- Flieger, W & Cabigon, J. (1994) Life table estimates for the Philippines, its regions and provinces by sex: 1970, 1980 and 1990, Health Finance Development Project Monograph No.3, Quezon City: UP Economics Foundation Inc.
- Gultiano S., Urich, P. & Balbarino, E. & Saz, E. (2003). *Population dynamics, land availability and adapting land tenure systems: Philippines, a case study*, Rome: Food and Agricultural Organization, Committee for International Cooperation in National Research in Demography.

ABOUT THE AUTHOR

ALAN B. FERANIL is the current director of the USC Office of Population Studies Foundation, Inc.