EDITORS' INTRODUCTION

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The Philippines National Statistics Office, in collaboration with Macro International and with funding from the United States Agency for International Development as part of the ongoing series of Demographic and Health Surverys, performed the most recent National Demographic Survey (NDS) in 1993. As is typical in these serveys, detailed retrospective information on family planning and child health for roughly five years preceding the survey where collected. Following this survey, the Philippines Safe Motherhood Survey (SMS) was administered to over 90 percent of the ever-pregnant women in the National Demographic Survey sample. This also focused on births in the five years preceding the survey, but the center of attention was the mother and her health. At the completion of these surveys, a project to utilize the data was developed by the University of the Philippines Population Institute and the Program on Population, East-West Center. A call for proposals was issued in the Summer of 1994, with work beginning that Fall on twelve projects. In December of 1995, a national dissemination seminar was held in Manila to present the results of the studies.

This volume presents a selected group of the papers from that seminar. They are representative of the larger set of papers in their breadth of coverage of policy issues. Three focus on health. The paper by Costello et al. examines the determinants of child morbidity in the Philippines. Acuin and her co-authors estimate the effectiveness of traditional health providers' health care. Sunico and her team look at indicators of the possible ease of spread of HIV. The other three papers examine, in varying ways, the behavioral and policy underpinnings of high fertility. Perez and Palmore discuss and quantify the implications of varying definitions of the concept of unmet need for family planning. Go and Palmore demonstrate the importance of regional variations in client populations in accounting for differences in contraceptive prevalence rates. Park and Cabigon examine the relationship between fertility and neonatal and infant mortality.

The period under study in the survey, roughly 1988 through 1993, was not a period of great progress for the Philippines in terms of fertility decline or health. Once a relatively low-fertility country in the region, relatively slow fertility decline in the Philippines led to a situation where, by the middle 1970's, fertility in the Philippines was higher than any of its socioeconomic peers in Asia. The fertility differential has grown in recent years. In the two decades preceding the survey, the total fertility rate fell from nearly 6 (in the 1973 National Demographic Survey) to just over 4 (in the 1993 National Demographic Survey). In contrast, the 1971 census estimate of the Indonesian total fertility rate was 5.6, and the 1991 Demographic and Health Surveys estimated total fertility rate was 3. Political instability undoubtedly contributed to supply-side disruptions in the family planning program in the Philippines, and the Aquino Administration was distinctly unfriendly to family planning. At the same time, the Philippines is overwhelmingly Roman

Catholic, and the Church both disapproves of the use of artificial forms of contraceptives and encourages high fertility of its members. Therefore, an unresolved question in attempting to explain the relatively slow decline in fertility is whether it is because of the way in which the family planning program functions, or because people are making choices to have relatively large families, that is, not to use contraception even though it may be available. The policy implications of the two alternatives differ tremendously. In some ways, the easy problem to solve is poor program performance, since both users and program funders are likely to be pleased with increased contraceptive usage. Resources are a constraint, of course, but the path to increasing contraceptive usage as means of reducing fertility, is clear. Demand-side problems potentially are more difficult to solve, because users need to be convinced to limit or space births, which is a behavior many are not currently displaying, or not displaying until relatively high parities are reached.

Contraceptive Use and Fertility

Shedding light on the policy question of targeting scarce resources is the paper by Perez and Palmore. The concept of the unmet need for contraception is one which traditionally has relied upon a definition first elaborated by Charles Westoff (e.g., Westoff, 1988), namely the percentage of currently married women not using family planning but who either do not want any more children or intend to space their next birth. Using this definition, unmet need in the Philippines was 26.1 percent. This figure is quite high in comparison to other countries in the region, and is only slightly smaller than past estimates of unmet need in the Philippines. Nevertheless, Perez and Palmore conclude that the conventional estimate of unmet need underestimates the true level of unmet need for several reasons, which they group into categories of poor contraceptive use and health risks. In the former category, they place use of ineffective methods, of methods which couples lack sufficient knowledge to use correctly, and of methods which have high discontinuation rates. Health risks include high parity, close birth spacing, and childbearing at mother's ages which are either too young or too old.

Within the Perez and Palmore categorizations, it is possible for women to have a conventional unmet need, and to have a health risk unmet need at the same time. Indeed, of the 26.1 percent of married women with conventional unmet need, three-fifths had a health risk unmet need largely comprised of women with more than four children. These are women, in other words, who say that they want to limit or space births (and so have conventional unmet need) and who, in consideration of their high parities, would be better off for health reasons, as well as in terms of attaining their fertility preferences, were they to employ contraception. There are also large numbers of women who *do not* say that they want to limit or space their births, and therefore have no conventional unmet need, but who have health risk unmet need; and large numbers of women who are using contraception, and so again have no conventional unmet need, but because they are using a method without sufficient knowledge of how to do so, have a "poor contraceptive use" unmet need. Perez and Palmore conclude that health unmet need generates an additional 10 percent of married women, and poor contraceptive usage another 11.8 percent, for an expanded unmet need in the

Philippines of 47.8 percent. In other words, roughly one-half of all married women in the Philippines are either not using contraception when (in some sense) they should be doing so, or using methods such as periodic abstinence without proper knowledge of how to do so.

One perplexing characteristic of the Philippines is the large degree of unexplained variation in fertility among regions. One might expect that regional contraceptive prevalence rates and fertility rates would be fairly closely associated with one another. However, Go and Palmore find that a simple regression of fertility on contraceptive prevalence, using regions as the unit of analysis, fits the data poorly. Very large deviations from the predicted relationship between contraceptive usage and observed total fertility rates are evident in the expected statistical outliers, such as Metro Manila, where fertility is very low, or Region 5 (Bicol and surroundings), where fertility is very high. Significant deviations occur as well for other regions.

Go and Palmore demonstrate that a large share of the variation in the relationship between contraceptive usage and fertility can be explained by considering who needs contraception, and how well they use the means of contraception they choose. If large proportions of women use ineffective methods, for example, this will tend to weaken the relationship between contraceptive usage and fertility, as will high levels of infecundity or sexual abstinence (either premarital or within marriage). So, for example, while contraceptive prevalence in Metro Manila is not as high as in some other regions, the proportion of women not at risk of pregnancy because they are not currently married is very high. In essence, the "synthetic prevalence" of contraceptive is very high in Metro Manila, when one scales the potential users of contraception downward to control for the marital composition of the population there. The authors go on to show that levels of unmet need for contraception are in fact the highest in those areas where fertility is highest. They discuss the policy implications of this finding, particularly in terms of regional resource commitments to family planning.

Child Deaths and Fertility

Cabigon, Kantner, and Park attempt to quantitatively separate the effect of child death on subsequent fertility in the Philippines into physiological and behavioral components incorporating breastfeeding and demographic-socioeconomic-cultural factors. Using life table and multivariate hazard analyses of the 1993 National Demographic Survey, they establish the significance of the physiological and behavioral components of child mortality, breastfeeding, employment of mother after the birth of the index child, wantedness of the index child and mother's education and the insignificance of sex of the index child, religion, and rural-urban residence on the probability of having a subsequent birth controlling for the significant effects of maternal age at birth and birth order of the index child. The authors show that the physiological or early child loss effect which is at least a combination of the breastfeeding and behavioral effects and the breastfeeding effects were very strong irrespective of family size. On the other hand, the behavioral or late child loss effect which is a tendency to replace the lost child was important only in small families. These effects of

child death, whether physiological or behavioral, and of breastfeeding status were initially strong but rapidly diminished with time. The dominance of the physiological component of child death over the behavioral component and breastfeeding indicates that the Philippines is in a stage of transition from traditional to rational reproductive activities.

Health Care Delivery and Utilization

Significant health problems can be noted on a number of fronts (Herrin et al., 1993). The Philippines was unable to achieve any measurable decline in infant mortality during the 1980s, a record of which contrasts poorly with the other ASEAN countries. Malnutrition is common and infectious diseases continue to play a major role in the overall mortality and morbidity profiles. By the end of the 1980s government health statistics showed both respiratory and diarrheal diseases ranked high among all causes of infant and childhood deaths. As of 1991, more than a third (34.2 percent) of all registered deaths to children under five years of age were attributed specifically to one of these two conditions (Health Intelligence Service 1994, Tables 17 and 23). Major differentials in infant mortality also exist, with mortality rates being highest in rural areas (specially those located far from Metro Manila), among poorer and less educated households, and for children born of older, high-parity women (Costello, 1988).

Government efforts to control infectious diseases have concentrated largely upon a Primary Health Care Program which emphasizes immunizations, oral rehydration therapy, and a network of village-level clinics, known as Barangay Health Stations. This approach has met with only moderate success, largely because of the limited resources being made available to the health sector. Total expenditures on health did not exceed 1.7 percent of the gross national product during the 1980s while government spending on health as constantly measured in monetary units and on a per capita basis failed to show a measurable increase throughout this same period (Herrin et al., 1993).

In their contribution to the present volume, Costello and co-authors examine the morbidity experience of infants and children in the NDS sample. They focus on two dimensions: occurrence of acute respiratory infection (ARI) or diarrhea in the two weeks immediately preceding the survey, and the curative care (if any) employed to treat the illness. Within the latter category, special emphasis is given to mother's knowledge about and use of oral rehydration therapy (ORT). They attempt to identify determinants, at the level of individuals, families, and communities, of variations in morbidity and treatment patterns.

Costello et al., find that there are some predictable differences in odds of morbidity and subsequent treatment. For example, children with more educated parents, or whose father is in a relatively high-status occupation, are both less likely to become ill and more likely to receive treatment. On the other hand, this study also generated some surprising findings. For example, morbidity rates for both ARI and diarrhea are higher in urban areas than in rural areas. As another

example, mothers in high-status occupations are less likely to bring children in for treatment of ARI or diarrhea than are other mothers.

One of the Philippine government's strategies to stretch health care sector resources has been to pursue "intermediate technologies," that is, to make basic health care available widely by providing a limited range of services and providers. Costello and his co-authors discuss the performance implications of this strategy. In particular, they find that relatively higher-occupational-status parents are less likely, all else constant, to use public primary health facilities, such as barangay health stations. Roughly half the number of mothers who have heard of ORT actually have used it, and Costello et al., see this as the side effect of tying ORT distribution of the barangay health station, as the ORT packets are seen as part of the "intermediate technology" dispensed at all the health stations. Oral rehydration therapy therefore is avoided by many couples able to afford other more expensive and typically less appropriate treatment protocols, such as antibiotic treatment.

Acuin and her co-authors attack the resource availability questions from another angle. Given the shortage of resources in the Philippine health sector, one suggestion for extending health care, especially to more remote areas of the country, is to use the existing network of midwives and traditional health care providers to deliver a limited array of primary care alternatives. Acuin et al. use data from the Safe Motherhood Survey to assess the role of family characteristics in the choice of *hilot*, the traditional birth attendant, for prenatal, delivery, and postnatal problems. They also assess the importance of family-level covariates in explaining treatment outcomes.

While the evidence is mixed, they tend to find that women of lower socioeconomic status, of higher parity, and either very old or very young mothers are those most likely to seek out the *hilot*. They also find that *hilots* consulted to treat episodes of diarrhea in children are associated with increased probabilities of observing inappropriate treatment protocols, such as the withholding of fluids. On the other hand, *hilots* are the preferred care-givers for certain post-delivery conditions, such as uterine prolapse, and are the most popular care-givers for delivery. Acuin and co-authors take these findings to imply that *hilots* are widely accessible, and could be widely employed to deliver certain services. However, the limited survey evidence available shows that *hilots* need to be closer to mainstream in modern health care delivery if a strategy substituting *hilots* for more highly-trained medical staff is to succeed. Costello et al. show that the barangay health stations already are under-utilized by the non-poor, however, and Acuin et al. show that lower socioeconomic status individuals are those most likely to be treated by *hilots*. Therefore, expanding the role of *hilots* in order to extend health care access to the poor would seem to be providing those already utilizing the existing network of barangay health stations with an alternative treatment source. Considering the results of the Costello study, which showed that it was *not* the poorest poor who were least likely to treat an episode of infectious disease, a policy expanding the role of *hilots* in the provision of modern health care may not represent the best use of available resources.

To date, little work has been done on modelling HIV/AIDS transmission in the Philippines. However, the risk factors that foster each of the forms of transmission of HIV are all present in the Philippines, with sexual transmission being by far the most important (Manaloto et al., 1991; Tan, 1993a; Tan and Dayrit, 1994). Fully 95 percent of existing infections have been transmitted sexually, with 70 percent due to heterosexual sex (HIV/AIDS Registry, 1995). The first AIDS cases in the Philippines were detected in 1984 and the first HIV infections were documented in 1985 among sex workers in Angeles and Olongapo (Tan and Dayrit, 1994a:125). Since then, the number of reported cases has grown steadily. By July 1995, 659 HIV infections had been reported, of which 212 were AIDS cases (AIDS Registry 1995). Estimates of the actual number of HIV infections varied from 15,000 to 50,000 (Tan and Dayrit, 1994a:127). The large number of Filipino contract workers abroad, possibly as many as 1.2 million (Tan 1993 a:285) in a population of a little over 60 million, and their low level of awareness of their HIV/AIDS risk are important factors affecting the possible size of the epidemic in the Philippines.

If in fact the HIV epidemic in the Philippines is in its early stages, the disease's asymptomatic early period makes observation of actual infection difficult . In the final paper in this volume, Sunico and her co-authors attempt to add to the knowledge base for the Philippines by employing two well-accepted propositions. First, behaviors which spread the wider group of sexually transmitted diseases (STDs) also account for much of the spread of HIV. Second, infection with a non-HIV STD makes subsequent infection with HIV easier. In the Safe Motherhood Survey, information on the symptoms of STDs were collected, which Sunico et al. use to estimate behavioral models of infection. Since in many cases, non-HIV STDs are asymptomatic, they acknowledge that their estimate of a 2 percent rate of STD infection is likely to be conservative.

They find that urban women are more likely to show symptoms, as are women of low socioeconomic status. Women who report that their husband engages in extramarital sex also are likely to display symptoms of STDs. Of those infected, over 40 percent did not seek treatment. Because of high likelihood of STDs, notably HIV, being passed on to newborns, the Sunico team calls for appropriate management of STD cases at barangay health stations, and especially for prenatal screening for STDs.

The various policy insights provided by these papers are indeed invaluable. If only for this reason, and better yet, the utilization of such by the Philippine Population Program managers, this special issue of the Philippine Population Journal merits attention.