Comparison of Subnational Availability of Women’s Family Planning Services and Women and Children’s Health in Cambodia (2013) and the Philippines (2014) using DHS Program Data

BACKGROUND AND RESEARCH QUESTION

A comparison of the need for family planning services in the Philippines versus Cambodia will provide insight into how these two Southeast Asian countries fare in this often overlooked topic. Such a comparison is worth doing because places where women are able to have less children are often seen with healthier and wealthier families, as the women are able to work and the children go to school. These two countries have been chosen for comparison because of their proximity in Southeast Asia, and their differences in income (GDP per capita in the Philippines being higher than in Cambodia). At the turn of the 21st century, some countries in the Southeast Asian region made vast improvements in their health infrastructure. Cambodia is one such place; an analysis of multiple rounds of Demographic and Health Surveys (from 2000 to 2010) data was analyzed for utilization of contraception and maternal health services, namely facility-based delivery, uptake for family planning and antenatal care. Several household units were used to measure socioeconomic status. It was found that access across both countries was quite variable, and we also assessed for family planning need, with the difference being near the same between the wealthy and poor quintiles. However, this was not the case in the Philippines. A PubMed search of family planning work done in the Philippines shows that most research done was in the latter half of the 20th century, with a bulk of the research in the 1990s. One remarkable study that stood out was in 1986 on 886 married Filipino women aged 15–49 years examined their use of contraceptives. In 1990, in a community of 10 and 100 barangays, a large majority of women (91%) reported use of some form of contraception. This study is evidence of the need for more research and future work.

The same is not true for the Philippines; unfortunately, data on hospitals and clinics was rather sparse and not uniform throughout the country, and the rural data was insufficient. In areas where there were both railroads and health centers, some but not all areas were covered within the buffer zones set around the railroads. In the Philippines, provinces where less households reported having a car also have higher percentages of women who report not having their family planning needs met. In Cambodia and the Philippines, only a few provinces have 50% or more children aged 12-23 months who have received all 8 basic vaccinations.

METHODOLOGY

Data were retrieved from the Spatial Data Repository, which has GIS shapefiles at the subnational level for both countries – 2014 data for Cambodia and 2013 for the Philippines. For Cambodia’s population density, Tufts University’s GIS Lab’s Mr. de la Cueva had the National Institute of Statistics of Cambodia, 2008 General Population Census of Cambodia. This data was not used for the actual analysis, but as an indication of the population density. Cambodia’s data was not spatially represented as an extent on the GIS platform. For the Philippines GIS database, these are two online sites (6). All of these data were in usable and workable forms. For this analysis, the buffer tool was used to examine the proximity of health centers to various important transportation features. Initially, the Near tool was to be used but there were issues with how it worked in the kernel object tool. The Near tool was unable to capture the entire extent of points, thus the buffer tool was used. The near tool is more reliable given the nature of the accessible data. Nonetheless, choropleth maps were created, and were spatially analyzed such that one could see the overlap in the access to services in those areas with unmet need for family planning, and areas of transport and health centers, and their relative distances in both countries. This analysis could help us glean where there are areas of high need for health services for women and children in these countries and whether modes of public transportation are available to meet these needs.

RESULTS

There are multiple implications of these data that can be used to better understand human geography. Transportation and children’s health in Cambodia, even in areas where there are high health centers and bus stops, there are still areas where there are lower numbers (44% – 65.1%) of children having all vaccinations and family planning needs met. Additionally, that more health clinics can be found within 10 miles of any bus stop that implies that access is very good, but the vaccine outreach strategy can still be improved. There is a consistent trend of using contraceptives in Cambodia as the women are able to better take care of their children. This is most likely due to the data being more reliable given the nature of the accessible data. Nonetheless, choropleth maps were created, and were spatially analyzed such that one could see the overlap in the access to services in those areas with unmet need for family planning, and areas of transportation and health centers, and their relative distances in both countries.

DISCUSSION

There are multiple implications of these data that can be used to better understand health centers and family planning need. One of these is the need for more research and future work. Such a comparison is worth doing because places where women are able to have less children are often seen with healthier and wealthier families, as the women are able to work and the children go to school. These two countries have been chosen for comparison because of their proximity in Southeast Asia, and their differences in income (GDP per capita in the Philippines being higher than in Cambodia). At the turn of the 21st century, some countries in the Southeast Asian region made vast improvements in their health infrastructure. Cambodia is one such place; an analysis of multiple rounds of Demographic and Health Surveys (from 2000 to 2010) data was analyzed for utilization of contraception and maternal health services, namely facility-based delivery, uptake for family planning and antenatal care. Several household units were used to measure socioeconomic status. It was found that access across both countries was quite variable, and we also assessed for family planning need, with the difference being near the same between the wealthy and poor quintiles. However, this was not the case in the Philippines. A PubMed search of family planning work done in the Philippines shows that most research done was in the latter half of the 20th century, with a bulk of the research in the 1990s. One remarkable study that stood out was in 1986 on 886 married Filipino women aged 15–49 years examined their use of contraceptives. In 1990, in a community of 100 barangays, a large majority of women (91%) reported use of some form of contraception. This study is evidence of the need for more research and future work. Nonetheless, choropleth maps were created, and were spatially analyzed such that one could see the overlap in the access to services in those areas with unmet need for family planning, and areas of transportation and health centers, and their relative distances in both countries. This analysis could help us glean where there are areas of high need for health services for women and children in these countries and whether modes of public transportation are available to meet these needs.

STRENGTHS AND LIMITATIONS

A strength to the datasets is that the DHS program provides a wealth of valuable data to choose from to create the present study. On the other hand, a major limitation to the data is that the DHS data in Cambodia is much more limited. Online data sources data for the Philippines were not very good and too low of quality. I came across many broken links. There is certainly more data on contraceptive use in the Philippines, but this data is not easily captured by reliable data sets. It is unfortunate that the capital city of Manila was lacking in data related to railroads and health centers. Another limitation is that the data for these countries are not for the same year. However, this should not be a large source of error as there was only a difference of 1 year, and the examined variables do not typically exhibit drastic change in such a short time.

RECOMMENDATIONS

Recommendations for future projects include:

- Continued research into more adequately capturing GIS data in Southeast Asian countries (especially the Philippines);
- Including cultural capital on how people in different areas see transportation, maybe ways in which we can eventually move and mobilize.
- Identifying reasons why married and/or union women feel that their family planning needs are not being met.

REFERENCES

Blank, J. and S. Riphagen, F.E., O.S. de la Cueva, and S. Koelb, Harvarrd University, HumData, Open Development Cambodia, PH 206, Spring 2019

TABLES

CITATIONS FOR DATASETS

