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PROXIMATE DETERMINANTS MODEL OF INFANT SURVIVAL FOR THE PHILIPPINES FOR
2003 AND 2008

Mr. Paolo Miguel Vicerra



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จำนวนค่าเฉลี่ยประชากรโลกในปัจจุบัน พบว่า จำนวนตัวเลขการรอดชีพของเด็กแรกเกิดนั้นลดลง อย่างไรก็ตามในแต่ละประเทศนั้น มีประ สบ ก า ร ณั ใน ความ มุ่ง มั่น ลดลงที่จะลดปัญหานี้ ประเทศฟิลิปปินส์ เป็นตัวอย่างอีกประเทศหนึ่งที่ประสบปัญหาจากการที่ไม่สามารถยึดเป้าหมายที่ตั้งไว้ได้ การศึกษาวิจัยในครั้งนี้คือ ทดสอบปัจจัยว่าอิทธิพลของการตายทารกในประเทศฟิลิปปินส์ โดยเฉพาะทางด้าน ประชากร และ พฤติกรรมทางด้านสุขภาพกับการผนวกกับบริบททางสังคมและวัฒนธรรม ปัญหาเกี่ยวกับความรุนแรงในครัวเรือน การตั้งครรภ์ด้วยความสมัครใจ และ การ ตัด สิ้น ใจ ที่ จะ มี บุ ต ร ใน แต่ละ ครอบ ครัว ซึ่งปัจจัยด้านแนวคิดและพฤติกรรมนี้ส่งผลกระทบต่ออัตราการรอดชีพในเด็กตามที่งานวิจัยอื่น ๆ ได้ศึกษา

ในการวิเคราะห์ข้อมูล ผู้วิจัยได้ใช้ข้อมูลจากการสำรวจของ National Demographic and Health Surveys โดยการคำนวณเสื่อมถอยแบบสองทางในการคาดประมาณตัวแปรเพื่อหาผลของการรอดชีพ โดยคุณลักษณะของสองรูปแบบนี้ เป็นการวิเคราะห์ตัวอย่างในแต่ละชุด โดยรูปแบบที่หนึ่งจะใส่ตัวกำหนดทางบริบททางด้านสังคมและเศรษฐกิจ และรูปแบบที่สองจะเพิ่มตัวกำหนดปัจจัยการรอดชีพอื่น ๆ เช่น ปัจจัยที่เกี่ยวข้องทางด้านสุขภาพ ซึ่งกลยุทธ์นี้จะอนุญาตให้เปรียบเทียบระหว่างความสัมพันธ์ของผลกระทบของแต่ละชุดของตัวกำหนดในแต่ละผลการศึกษาได้

ผลของการศึกษาในครั้งนี้แสดงให้เห็นว่าการวิเคราะห์ตัวกำหนดทางด้านบริบทด้านสังคมและวัฒนธรรม และตัวชี้วัดการเพิ่มตัวกำหนดที่ใกล้เคียงกันตามลำดับนั้น จะลดข้อโต้แย้ง การตายทารกจะสามารถพยากรณ์ได้ง่ายขึ้นเมื่อปัจจัยอื่น ๆ ได้รับความสำคัญ ดังตัวอย่างเช่น ปัจจัยทางการศึกษาของมารดาที่ไปในทางเดียวกันหรือต่างกัน มีความสอดคล้องกับพฤติกรรม ตัวอย่างเช่น การสอนการให้นมบุตร การเปิดรับต่อการติดเชื้อ และการสร้างภูมิคุ้มกันในเด็กโดยสมบูรณ์ ทารกในมารดาที่ไม่ได้รับการศึกษา และมาจากสภาพสังคมและเศรษฐกิจที่ต่ำจะมีประ สบ ก า ร ณั ในการเสียชีวิตของทารกสูงกว่ามารดาที่มาจากกลุ่มที่สูงกว่า นอกจากนี้ ความเพียรพยายามจะเป็นการป้องกันอัตราการลดลงของจำนวนการรอดชีพโดยธรรมชาติจากการที่ทารกเกิดจากมารดาที่ตั้งครรภ์ด้วยความสมัครใจ และทารกที่เกิดจากมารดาที่ไม่มีการถูกทำร้ายโดยคู่ครองจนถึงขั้นที่จะทำให้ทารกเสียชีวิต ซึ่งผลของการศึกษาในครั้งนี้จะเป็นประโยชน์ในการสร้างนโยบายที่จะทำให้เกิดแนวโน้มที่ดีขึ้นต่อการรอดชีพในทารกและสุขภาพของประชากร

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KEYWORDS: INFANT MORTALITY / PROXIMATE DETERMINANTS / PHILIPPINES

PAOLO MIGUEL VICERRA: PROXIMATE DETERMINANTS MODEL OF INFANT SURVIVAL FOR THE PHILIPPINES FOR 2003 AND 2008. ADVISOR: ASST. PROF. WIRAPORN POTHISIRI, Ph.D., 178 pp.

On a global average, The number of infants who are unable to reach their first year of birth birthday is declining across countries, on the average notwithstanding that some countries experience a lag in their respective aimed outcome level. The Philippines is one example of such a country to have that has been unable to achieve its Millennium Development Goal. The focus of this study is to test factors that influence infant mortality in the Philippines, particularly on demographic and health behaviours, in the Philippines with the inclusion of socio-cultural facets regarding attitude on household violence, intention of pregnancy, and household decision-making capacity among others as these remain to be studied. These attitudinal and behavioural factors bear consequence on impact the survival of children according to literature of research of other societies. The analysis, using the 2003 and 2008 National Demographic and Health Surveys, employs binary logistic regression of parameter estimates toward the outcome of infant survival. Dual model specifications are analysed for samples of each period covered for two surveys: one model includes socioeconomic determinants and the other model retains that and additionally contains of proximate determinants, i.e. where health-related factors are present. This approach allows the comparison of the relative impact of each set of determinants on the outcome.

Results show that analysing with socioeconomic determinants and subsequently adding proximate determinants indicate that the effect of the former have less impact leading to the contention that infant mortality is better predicted when a multitude of factors are considered. It is exemplified as well that there are educational gradients relating to certain behaviours, such as breastfeeding practise, exposure to infection, and completion of immunisation. Infants whose mothers have no education and are from a low socioeconomic status experience more infant deaths than those from the other extreme of the said characteristics. Furthermore, the counterintuitive result where infants borne from intentional pregnancies and infants of mothers who do not justify intimate partner violence suggest higher likelihood of death. These annotations may then be utilised toward creating policies that are better targeted to achieve the desired outcomes of improved infant and population health.

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Student's Signature

Advisor's Signature

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Chapter 1

Introduction

According to the World Health Organization (WHO), what continues to be a foremost direct cause to new-born deaths is infection, or otherwise known as sepsis (World Health Organization 2012). This encompasses a large range of possibilities including septicaemia, pneumonia, and congenital syphilis. Other direct causes may be trauma or asphyxia, or even malformations. Such cases are observed in the Philippines where the State has had difficulties in providing accessible quality healthcare, regardless of being in the urban or rural areas (Basics Support for Institutionalizing Child Survival Project 2004). The main causes of such deaths have remained similar in the past decade based on the National Epidemiology Center's 1999 and 2008 Philippine Health Statistics presented in Table 1.1. There is still a prevalence of infectious diseases whereby it is experienced by about 37 per cent of infant deaths with respiratory infections as primary cause. Aside from congenital anomalies, low birth weight is a primary cause as well which is linked with short gestation and the poor nutrition of mothers.

Notestein (1953) observed that fertility and mortality has decline over time albeit each did at different progression. Omran (1971) has indicated that the improvements with

regard to lowering death rates have been attributed to many a factor, one of them being continued technological advancement in health care. Because of this decline in death rates across populations, there is a corresponding increase the longevity, particularly for the youngest cohorts.



Table 1.1: Percentage of the five leading causes of death among infants in the Philippines between a ten-year period, 1999 and 2008

1999		2008	
Respiratory conditions of new born	18.3	Bacterial Sepsis*	14.2
Pneumonia	14.8	Pneumonia	11.3
Congenital anomalies	11.5	Respiratory distress of new born	11.3
Diarrhoeal diseases	4.0	Disorders related to short gestation and low birth weight	7.4
Birth injury	3.4	Congenital malformations of the heart	7.0

*The categories' names have changed slightly but the underlying specific causes which they comprise are the same.

Source: National Epidemiology Center.

The 1999 and 2008 Philippine Health Statistics

The social and economic developments of populations are in part determined by mortality levels, particularly based on infant mortality rate, IMR which is defined as the risk of an infant born alive to pass before his/her first birthday (Masuy-Stroobant and Gourdin 1995). With infant mortality being a focal social indicator as evidenced by its being a component of global development goals dubbed as the Millennium Development Goals (MDG). These MDG's is a set of targets that are agreed upon by United Nations member states to indicate population development by 2015; infant deaths had been monitored because they tend to indicate maternal health and

general socio-economic development of a country (United Nations Children's Fund 2012). There had been 8.9 million infant deaths in the world in the year 1990; and in 2012, it had dropped to 4.8 million infants. In terms of IMR, this translates to about 80 per cent reduction from 63 deaths per thousand live births to 35 deaths per thousand (WHO 2012). This is a favourable result although it masks the disparities between regions where parts of Africa and Asia are still lagging behind, including the Southeast Asian region. This is evidenced with Singapore having an IMR of two (2) deaths per one thousand live births in the period 2005 to 2010; while Myanmar experiencing 53 deaths per one thousand live births in the same period according to the United Nations population data (2012) as observed in Figure 1.1. They are at extreme points while other countries including the Philippines and Thailand have IMRs that are below the regional average in the past two decades.

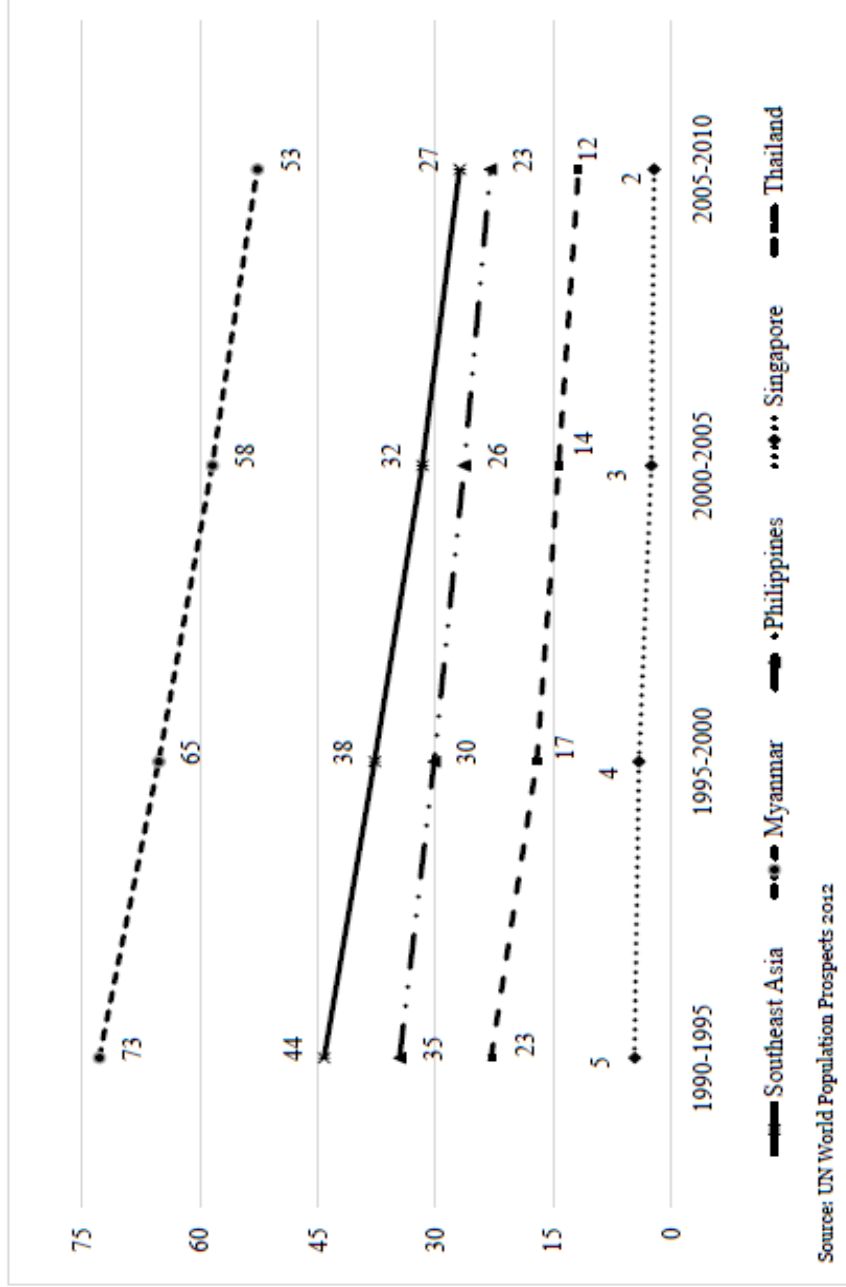
The government agency in the Philippines, concerned with data interpretation and dissemination called National Statistical Coordination Board (NSCB) claims that it is on its path to achieving the desired IMR level of 19 deaths per thousand live births by the year 2015 (NSCB 2011). From the reference point of 1990 when the IMR was at 57 per thousand live births, there has been a decrease of 75 per cent to 24.9 infant deaths per thousand live births in 2008.

There has been a locus of studies on the mechanism of what affects IMR and consequently, disparities have been determined on certain social characteristics

whereby there are factors that improve it between societies and even within a society. Among such factors are mother's education (Caldwell 1979, Morsund and Krevdal 2003) and household wealth (Pamuk, Fuchs et al, 2011). These are the generally observed factors between societies but there are country-specific contexts that relate to the propensity



Figure 1.1: Infant mortality rates of Southeast Asia and selected countries; 1990 to 2010



As observed in Table 1.1, the leading causes of infant deaths are largely preventable and there are reasons from both the supply and the demand side of healthcare why they may be perpetuating. On the supply side, there are issues regarding equity, allocative and technical efficiency, and quality of care (Romualdez, dela Rosa et al, 2011). Health care delivery sites are adequate in the regional level because of budget allocation from the national government; but local government units have predicaments because population size is the basis for physical access to service, i.e. hospitals are built on this reason, and not on the basis of poverty incidence (Caballes, 2010). Health financing is also an issue since universal coverage is the aim of the government but those who are enrolled in the said scheme thus far are those who have higher incomes; lower income groups lack information on this matter therefore out-of-pocket financing is still prevalent (Romualdez, dela Rosa et al, 2011).

On the demand side, the perception of people toward healthcare access, reflects what the government side lacks. According to Becker's and her colleagues findings in Cebu, a metropolitan area in Central Philippines, people, particularly women, have a certain view of the public health care system whereby they may be unable to gain access due to lack of financial resources (Becker, Peters et al. 1993). If they do have the resources, they have a view that supplies are limited and they may not be able to avail them in the first place. Furthermore, women feel that the "...Department of Health personnel are often unapproachable and tend to favour friends and relatives in the distribution

of medical services and supplies.”(1993, 87). This distrust to the system of healthcare becomes the integrative barrier that women face in the attempt to achieve healthy well-being of themselves and their families.

1.1. Statement of the problem

The number of infants who are unable to complete their first year of birth is declining globally, but the Philippines have been short of achieving its goal in terms of the MDG on this matter. There are acknowledged reasons with regard to healthcare-delivery system shortcomings in the country but there are also factors that mainly revolve on the mother, her spouse, and the household itself that may affect the incident of the infant dying.

The focus of this study is to explore those factors in the Philippines. This area of study is lacking in the literature; existing studies for the Philippines are fairly dated (Ballweg and Pagtolun-an 1992, Guilkey and Riphahn 1998). As society changes in context including behaviour and policies, the elements affecting mortality events are changing as well and this dynamic has to be continuously scrutinised.

Another aspect is the framework employed by the mentioned studies. They focus on various set of factors and are not exhaustive of what may affect infant mortality. This may have been borne of data limitations at certain periods but, recent data are

available and comprehensive and allow more nuanced analyses. Therefore, this permits the need for new studies.

1.2. Objectives

The aim of this study is to examine the determinants of infant mortality in the Philippines. The following objectives are addressed:

- 1) Estimate infant death differentials by selected characteristics in the Philippines in 2003 and 2008.
- 2) Determine the association between socioeconomic and proximate determinants and infant mortality.
- 3) Compare the effects of these determinants between the two periods of 2003 and 2008

Based on the themes that will be discussed and on the literature referred, the analysis allows to determine disparities of IMR between different levels of socioeconomic background at the national level.

1.3. Significance of the study

This dissertation will provide an updated study on infant mortality in the Philippines. It includes variances between events of mortality for this age group between two succeeding periods of 2003 and 2008 which are yet to be analysed since previous studies on this matter date from the 1990's or earlier. There may have been changes in the Philippine society between decades that have passed.

The analysis also includes the introduction of individual- and household-level factors, and behavioural factors to discern sub-groups that experience a significantly heightened level of infant mortality at the national level. Among the factors that would be introduced here are women's status measures and intention of pregnancy. The introduction of such factors is deemed necessary since the context of the Philippines is different from that of other countries and therefore country-specific relevant issues have to be included in the analysis.

The factors utilised in the current study are to be subsumed as dimensions of socioeconomic and health-related attitudes. These aspects regarding predictive factors of infant mortality have been analysed in different contexts on other countries but have not been studied directly with infant mortality along with other factors for the Philippines. This is also the case for various health determinants. The procedure

involving both socioeconomic and health factors is novel in the Philippine context as it has not been intently utilised based on accessible data.



Chapter 2

Literature Review

The structure of the review reflects the three specific objectives mentioned in the preceding section. First, models of factors affecting infant mortality are presented. Secondly, the framework that is adaptable to the Philippine context is discussed. This is followed by a review on the socioeconomic factors that may affect the survival of an infant. Finally, the proximate determinants on infant survival involving health behaviour is presented.

2.1. Strategy for the review of literature

Various sources have been accessed to collect studies for review covering journal articles, theses, working papers, and reports. Most of the said materials are searched on databases such as JSTOR, Elsevier, Science direct, Scopus, and PubMed.

Since the study is on the factors or determinants of infant mortality; these phrases were used for searching the studies. Another search strategy is to find studies regarding each factor relating to infant mortality for two areas: first in developing countries and second for the Philippines. English is the sole language used to search for the items

even in the local database, Philippine eLibrary, to find any book because of lack of study in the local languages of the Philippines on this specific topic.

2.2. Frameworks for infant mortality

In the past decades, studies on infant mortality utilised frameworks with a strong inclination toward behavioural factors. Therefore studies as Meegama (1980) proposed to use biological determinants or those relating to health where the focus is on infections but what this resulted to as criticised by Beninguisse and his colleagues (2011) is that it remain highly age- and cause-specific and tend to be focused on micro-level outcomes. A similar criticism may be said for the study by Bross and Shapiro (1982) where they included birth weight to their model. The authors observed that there are different points at which risk of survival dwindles in the life of the child depending on the duration of space regarding the preceding birth to a mother. This was analysed alongside the sex of the child and the literacy level and education of the father and the mother of index child.

Because of the perceived limitations of the mentioned studies in terms of framework, Palloni (1985) proposed that predictors would have to include: firstly, macro-level policies regarding social intervention as public subsidy; secondly, individual- to community-level policies as education and living arrangement; and lastly, policies

affecting infection exposure to indicate the people's susceptibility level to diseases. Although the framework is highly defined and detailed, this also bears problems because certain societies would have difficulty on implementing this on their studies due to accessibility of the data. Furthermore, once that limitation is encountered, studies would bear difficulty with regard to inter-country comparability.

It is deduced that multifarious factors would be involved in varying levels. Consideration regarding which of these factors may have direct or proximate causes is lacking in the literature as noted by Cramer (1987). His criticism revolves on the studies that utilise intervening factors in the form of health-related determinants but is inadequate in distinguishing whether social factors have direct or indirect effect on proximate factors. Therefore, he utilised data from the United States employ the log-linear model and test the method with prenatal care and birth weight as separate intervening factors. Results suggest that the individual factors have an impact on infant mortality but when intervening variables are introduced, the association presents the adjusted effects of the socioeconomic factors.

Cramer's (1987) study, although independent of it, is a similar approach to the one Mosley and Chen suggest for their contention on how child survival has to be viewed in relation to the determinants and how they are levelled within models. Their proposed approach is a proximate-determinant framework that is multidisciplinary in nature. They aimed to depict that social factors may be background aspects that affect

the bio-medical-related factors that women exhibit; and the latter ultimately determine the likelihood of the survival of their children (as seen in Figure 2.1). They indicated five (5) categories of proximate determinants which are: maternal factors, environmental contamination, nutrient deficiency, injury, and personal illness control. In addition, the socioeconomic determinants are divided into three levels which are the individual-, the household-, and the community-levels.

2.3. Mosley's and Chen's proximate determinants of child mortality framework

Mosley and Chen (1984) propose a comprehensive approach regarding the factors that lead to a child's survival unlike other studies that exhibit part and parcel of the probable causes of mortality for this age group. It is mentioned that this is toward child mortality but it is also applicable to limiting the analysis to infant mortality. Another strength of their framework is its specificity which leads to the general availability of data in developing countries. The factors may be gathered from general surveys and may not necessarily be dependent on vital records, which are often not readily available. With these strengths of their contention, it remains to be a framework and lacks the subsequent formulation on the method to which the data will be treated for analysis leading to dissonance and at times incomparability between studies that employ this proximate determinant framework.

2.3.1 Conceptual frame of the proximate determinants framework

Mosley's and Chen's (1984) framework of proximate determinants of child survival was borne of their criticism that social science research reflects a limited view on the factors affecting the said event based on social and economic aspects. The medical factors as they indicated functions through the experience of morbidity and the eventual death of an infant or a child have been ignored in the literature for the most part. They therefore proposed a model, as seen in Figure 2.1, to study the influences of infant mortality in developing countries. This new conceptual model takes into account both biological and socioeconomic factors.

The proximate determinants are categorised into five groups. The maternal factors reflect the health of the mother which influences the pregnancy outcome. Environmental contamination subsumes the vectors or the mode of transmission of infections to the child and as well as the mother. Nutrient deficiency as a category considers the nutrition of the infant from the point of birth until he advances age meaning the mother's nutrition status is covered also because she is the source of sustenance of her newly born child. The fourth category is injury which covers mainly external factors related to the physical harm the infant may be subject. And lastly, personal illness control are the factors that the mother take for herself and her baby, which is why it is divided to two: (1) the preventive control which is to keep herself and the child healthy that includes following the inoculation schedule; and (2) the

curative control meaning that when the mother or the child is sick, they consult a medically-trained professional.

The socioeconomic determinants according to the framework are subsumed to the individual-, household-, and community-level factors. These factors depict the capacity of the mother, her family which composes the household, and the entire community to embody and perform the health-related factors within the proximate determinants. For example, a mother's decision to take her child to a practitioner of traditional medicine or a professional may be affected if she is older or younger. These socioeconomic determinants then, work on the proximate determinants which reflect the health status and behaviour of the mother and, to some extent, her child. Ultimately, these may indicate the survival of the child.

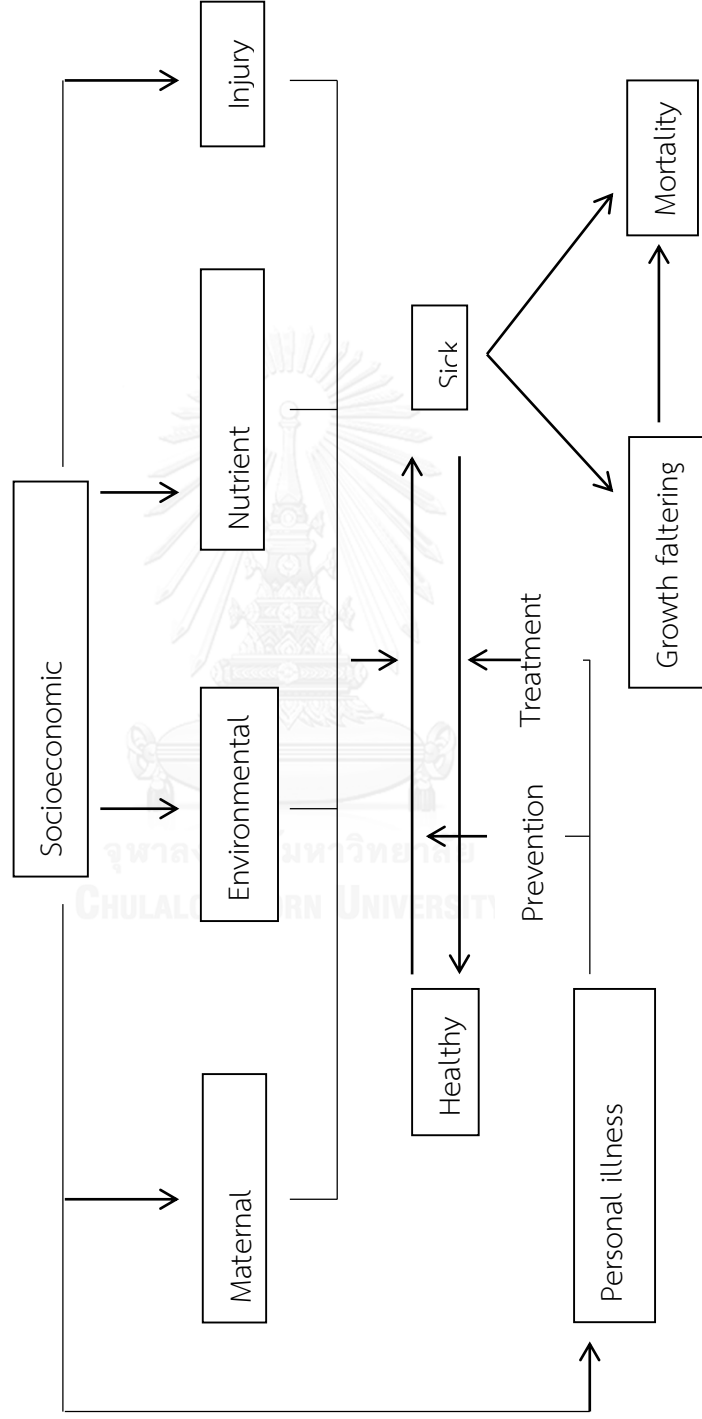
2.3.2 Previous works using the Mosley and Chen framework

Matterson, Burr, and Marshall (1998) did a study having similar tenets to Mosley's and Chen's. They analysed multiple sources of data with the vital registration data from the United States as the base for the infant mortality study. The log-odds form of infant deaths whereby the cause of death is unidentifiable is treated using a generalised, hierarchical regression technique. This multilevel technique is to follow the premise that the locality of the events are indicative of the probable status and lifestyle of the child and so aggregate community variables are used in the form of

poverty rate, level of urbanisation, expenditures, and hospital-related accounts among others. The individual-level socio-demographic characteristics as race and mother's education and age are differentiated from another level of individual-level proximate determinants on maternal weight gain, prenatal care, maternal risk factors, and number of births. Although both behavioural and health-related factors are included in the study, it mentions too few of them therefore other aspects of maternal and child health are overseen.



Figure 2.1: Mosley's and Chen's (1984) proximate determinants on the health dynamics of a population



Mosley and Chen 1984; 29

Because of the aim of the framework being proposed is to utilize highly accessible data; it has been employed in analyses regarding developing countries. Da Vanzo's, Butz's, and Habicht's analysis (1983) on Malaysia examined association of higher parity with increase in infant mortality and that this effect would appear at certain period of the first year of life as early neonatal or late neonatal stages. Deaths in the late neonatal stage is observed to be predicted by behavioural aspects of the household whereby it may be because the birth is related to unwanted pregnancy. This observation points to the importance of behavioural determinants influence the health-related proximate determinants according to the authors.

Martin, Trussel, Salvail, and Shah (1983) have a similar research analysing nutrition levels of male and female infants in the Philippines, Indonesia, and Pakistan. They used the hazard model to examine if there is favour attributed to either male or female infants in terms of food provision. It is found that in the Philippines and Indonesia, boys have slightly higher risk of death linked with malnutrition; but the opposite relation between malnutrition and mortality is more pronounced among girls in Pakistan leading to the conclusion that underinvestment in the health of female infants occurs resulting in higher deaths. Underinvestment demonstrates itself in terms of the level of care an infant receives which can be related to healthcare practice and obtaining proper nutrition.

This notion of underinvestment is observed in Ballweg's and Pagtolun-an's (1992)

study in Northern Mindanao, which is one of the 17 regions located south of the Philippines. It adapts the Mosley and Chen framework of proximate determinants by dividing them into four categories namely parental behaviour, biological, health, and socio-economic factors. These sets of factors are made to undergo a series of regression equations; first as independent sets; second where all the factors shown to be significant are entered into one stepwise method; third, when the variable with the strongest association and highest chi-square value is entered first in the equation; fourth, potential intervening factors are introduced; and finally, the underinvestment measure is introduced to show if it intervenes with the health factors and mortality outcome. The authors' observation is that regardless of biological and health factors, underinvestment is important to consider or determine if the child reaches higher age. Parental behaviour in this case matters based on their model. It may be developed further when integrated with the concluding remarks of Dargent-Molina, James, Strogatz, and Savitz (1994). They utilised the Cebu Longitudinal Infant Health and Nutrition Study for the Cebu province in the Philippines to determine if maternal education is significant to the incidence of infant diarrhoea but as they found, there are factors lacking in terms of stunted results. The outcome with this set of determinants may have to interact with other determinants still and they have suggested that this may be the strength of using the framework of Mosley and Chen (1984) as it incorporates social, behavioural, and bio-medical paradigms.

The variety of models utilising an approximation of the proximate determinants framework also shows that there are various statistical methods that may be employed depending on the nature of the data. As such, this immediate preceding method bears strengths with regard to the data source which has similarities to existing surveys as the Demographic and Health Survey.

2.4. Socioeconomic determinants of infant mortality

The following section presents related literature on the factors within the sets of socioeconomic and proximate determinants based mostly on the Mosley and Chen (1984) framework. The socioeconomic determinants are divided into the sub-sections: individual level (2.4.1), household characteristics (2.4.2.1), and household relations (2.4.2.2).

2.4.1. Individual level

The sex of the infant is one determinant that is often accepted as generalisation where male infants' deaths are more prevalent than female infants (Waldron 1998). But there are recent determining factors that have been studied to how this occurs; one of which being that mortality is biased toward males because their parents are of lower economic status (Almond and Edlund 2007) or that they are borne from mothers with low gestational weight (Cagnacci, Renzi et al. 2004). Martin et al. (1983) noted that

childhood mortality is higher for males than females in Indonesia and the Philippines; which is not the case in Pakistan. They attributed endogenous factors as health behaviour of parents toward their infant to be more important than the sex of the child per se. More recent studies have this shortcoming of not including sex of an infant to their analysis.

There are few studies that consider determinants of infant mortality in the Philippines, and there are fewer still focusing on the effect of education of parents on the event. Caldwell's (1979) study focused on Nigeria and Kravdal's (2004) focus is on India. Both authors considered education as the sole description of women's autonomy status in the individual as well as the community level. Fuchs', Pamuk's, and Lutz's study (2010) on the other hand includes the dimension of wealth and education to determine the degree of influence of both factors. Their inter-country analysis reveals that - using 39 Demographic and Health Surveys and employing multivariate models- in the majority of countries, mother's education matters more than household wealth.

Another study on education is Pamuk's, Fuchs', and Lutz's analysis (2011) on household wealth and education of mothers but with the inclusion of country-level factors comprising of per capita gross national income and percentage of the population in a country that had completed at least secondary education; also included are locational indicators, i.e. urbanisation. As an intervening variable, HIV prevalence is included as well. All these layers of variables determine the degree of

the effect education has on infant mortality. Albeit the analysis has well-defined higher level of variables, it is deficient on variables about individual social characteristics, particularly other household autonomy measures, and even the specific biological or health-related measures that may adjust the survival of infants.

Another aspect that has to be updated literature is the factor of the education level of the father. A study by Martin, Trussel, Salvail, and Shah (1983) compared Pakistan, Indonesia, and the Philippines regarding infant mortality based on demographic determinants. The result is that father's education does improve infant mortality but less so than the mother's education for the Philippines and Pakistan; and it is the opposite for Indonesia. But in later studies including that by Hobcraft, McDonald, and Rutstein (1985) whereby they included the literacy of the father for a cross-country comparison, which includes the Philippines, for the determinants of early childhood mortality to which infant mortality has been indicated together with early neonatal, toddler, and child mortalities. Although mother's education is significant rather than the father's, this is important because the survival of an infant may be based on both parents. This was also done by Guilkey and Riphahn (1998) for their study on Cebu, a province in the Philippines, where years of schooling was included and although the result is similar to Hobcraft's and his colleagues' (1985), Guilkey and Riphahn (1998) stated that it may be useful to exhaust to probable factors to better estimate the impact of perceived significant variables.

2.4.2. Household level

Household-level factors tend to focus on the urbanity and its ruminations in the literature. There are few studies that involve the dynamics of couples living within those households which are subsumed here.

2.4.2.1. Household characteristics

Hanmer, Lensink, and White (2003) did a study on factors that impacts improvement of a country's health status as reflected by its infant mortality level. Their observation is income per capita is significant for this outcome although, other aspects as education and gender inequality has a similar effect and through a policy perspective, the latter two would be more cost effective rather than focusing on increasing income per capita for respective countries. This is a dimension of household wealth as interpreted by some studies but there are also alternatives to interpreting wealth as done through DHS data as Arimond's and Ruel's (2004) where they have presented a difference between nutritional status of children with a wealth dimension in several countries in Africa, Asia, and Latin America. Other studies that involve the Philippines (Pamuk, Fuchs et al, 2011, Fuchs, Pamuk et al, 2010) have likewise shown that improved household wealth also decreases chances of infant mortality.

Another factor that has been shown to affect the incidence of infant mortality is the location of the household. The urban-rural difference are observed through the shortcomings in services and infrastructure particularly in developing countries as Ghana where it continues to persist for decades (Brown 1986, Gyimah 2002). This is parallel with the case based on observations in the Philippines by Caballes, (2010) for the national level and Romualdez et.al, (2011) for the province of Cebu where they have interviewed stakeholders regarding issues on healthcare supply.

The other factors in the household component are those relating to sanitised lifestyle of the household namely source of drinking water and toilet facility. This has been studied in various regions and differing methodologies (Waddington, Snilstveit, et al, 2009) and they have supported that infections among children are prevalent in areas with limited access to such amenities. Fink, Günther, and Hill (2011) studied multiple countries with instruments that include such factors in the period of 1986 through 2007 in relation to incidence of diarrhoea and growth stunting among children. Results suggest both water and toilet facilities do have an effect on both outcomes and they extended their observation to its probable progression to mortality.

2.4.2.2. Household relation

Bentley and Kavanagh (2008) viewed gender equity as situations that involve the fair distribution of benefits among men and women. A manifestation of such equality is on

female autonomy. As Caldwell and Caldwell stated, this is: “a woman’s...ability to make decisions on her own and act upon these decisions” (1993, p. 123). When women lack autonomy, they may experience shortcomings in various facets of their lives such as opportunities and ownership among others. It is also notable that there is no definite set of factors that affect the general empowerment of women; it can refer to household decision-making and intimate partner violence.

It is noted in the literature that autonomy measures may be viewed as attitudinal or behavioural aspects of social structure which can lead to them being effective on other aspects of volition within the household relating to the health of the mother herself or even her child. These are the limitation of the studies of Alcantara (1990) and Hindin and Adair (2002) because they use autonomy as the outcome of their study or it is for the purpose of determining the health and security of the woman herself and does not include family health in general.

Alcantara (1990) aims at testing whether assumptions of Western origin – that economic models enhance status of women while increasing fertility lowers it - were to hold with the Philippine experience of female status. Utilising the 1981 Women in Development Survey in the Philippines, she examines married women vis-à-vis married men and their decision-making capacities. She observed that the economic model of Western experience does not apply to Philippine women, i.e. that power allocation is impervious to women’s income. Whether or not her income is higher, the wife

predominates in decisions concerning subsistence and surplus resource allocation; and that she has equal power in fertility decisions. On the topic of fertility and status, what is found is the Philippine pro-natalist social structure prevails. If couples have no children, husbands have the power in the household. As the number of children increases, the wife gains power.

Household decision-making autonomy can be seen as one aspect of empowerment of women. Another would be not allowing violence against them. And by looking at the domain of empowerment, factors related to violence against women tend to describe the experience of inequality and inequity toward women better. One such study is by Hindin and Adair (2002). The authors study the individual and household characteristics associated with intimate partner violence, IPV, using data from the Cebu Longitudinal Health and Nutrition Survey. To employ a blended method of analysis, they had 56 interview respondents to explore the context of such violence. By using multinomial regression analyses, they determined that earning level and employment does not predict IPV. What is curious about the household decision-making measure is that the pattern varies for differences in how the decision is come upon. If either sex dominates the decision-making process, there is increased violence. This circumstance is avoided when joint decision-making is involved. This exhibits a U-shaped pattern of violence where the extremes have higher likelihood of violence; and such violence is avoided in the case of jointly performed decisions.

The previously mentioned studies on the Philippines are important to present the state of autonomy of women but they bear no relation to infant mortality or demographic outcomes in general. As explored by Mason (2001), gender status in general has a certain degree of impact on demographic outcomes that remains to be expounded. There are particular intricacies and issues regarding this because, as mentioned above; the concept of status and autonomy has its difficulties when it comes to operationalising it. Some authors have used measures of education and earning; and others attempted to include some cultural intricacies as they will be described below. The following studies have been done on the topic of contraception and fertility.

Mason and Smith (2000) compared between five Asian countries including the Philippines the fertility decisions made by both husband and wife. As with the comparison on whether they want more children or not, it was found as one component of the study that neither the wife's nor the husband's preference influences contraceptive use. The religious stance of the community and the actual availability of such services is a stronger influence on the matter. Another interesting comparison made is that in the other four countries in the study, the more autonomy a woman has with regard to being beaten or being afraid of arguing with her partner, the more likely her fertility preference would be equal or even dominate her husband's. This is not observed in the Philippines.

Olea's study (2004) tested a fertility model which focused on the background and proximate variables including female autonomy would affect fertility, specifically recent pregnancies. The author utilised the 1993 Unmet Need Survey; the purpose of which is to gather information on reproductive health risk considerations. The respondents are 25 to 44 years old women and their husbands. Autonomy is viewed as ability to communicate between couples and the subsequent decision-making on household concerns. It is found that autonomy is not a direct predictor of recent pregnancies; there is no significant difference between autonomous and non-autonomous women. It has to influence the background variables and proximate determinants of fertility in order to affect recent pregnancies.

There are few studies that consider demographic events and women's autonomy in general, and fewer still focusing on mortality particularly for the Philippines.

2.5. Proximate determinants of infant survival

Proximate determinants are based on the conceptualisation that bio-medical or health-related factors mediate between socioeconomic determinants and infant survival because these reflect the behaviour and practice of women for their health or their infants'. The sub-sections are as follows: maternal factors (2.5.1), environmental contamination (2.5.2), nutrition status (2.5.3), and personal illness control (2.5.4).

2.5.1. Maternal factors

The age of the mother is important because of the physical state their body may be in at the time of birth. Physiological well-being involves the status of reproductive system which can affect the infant for both young mothers and older ones (Gyimah 2002). A study done by the East-West Center Program on Population (1993) shows that infants in Indonesia borne of adolescent women were at more risk of mortality than those borne from women aged 20 through 29 years. Also part of the study are Thailand and the Philippines, although it is not as pronounced as that of Indonesia's case. This observation persists in studies in developing countries in general (Gyimah 2002, Kembo and van Ginneken 2009).

Birth interval and parity also contribute to an increase in the likelihood of infant mortality (Kembo and van Ginneken 2009) Birth intervals being less than 18 months and parity of six children have been observed to be detrimental in terms of child mortality. For studies within the Philippines, Ballweg and Pagtolun-an (1992) and Guilkey and Riphahn (1998) also included these factors into their studies with differing interpretations where it is a two-year interval for the former and one-year birth interval for the latter.

A factor that is oft included in models of infant mortality with respect to maternal factors is the unintentional nature of a pregnancy. This may have an effect on the

health of the woman or her behaviour. As Chinebuah and Perez-Escamilla (2001) had studied in Ghana, women who had such unintended pregnancies increase the likelihood of breastfeeding for shorter periods than those who did plan for their families. This effect on breastfeeding duration has also been studied in Bolivia and Paraguay (Shapiro-Mendoza, Selwyn et al, 2007). Although their result shows that unintentional pregnancy does not affect the duration of breastfeeding, it bears importance to take note of this for different societies. This observation of appropriate breastfeeding duration had also been suggested in Ulep's and Borja's (2012) study in the Philippines. As exemplified by these studies, there may be an effect of unintentional pregnancy on infant mortality in the Philippines and it is a factor yet to be recently studied in this context as the previous analyses are of Tan's (1981) and Ballweg's and Pagtolun-an's (1992). Both suggests that unintentional pregnancy may manifest its effect through different means with health behaviours as breastfeeding as among these said reasons.

2.5.2. Environmental contamination

Using demographic and health surveys of Ghana and Nigeria, Ahiadeke (2000) presented that there is a certain degree of prevalence of mixed-fed infants as those who are exclusively breastfed. The issue he tackled is that this behaviour of feeding interacts with the sanitation condition of the household leading to health risks in the

infant particularly with diarrhoea. Another study done is the relationship between income and sanitation toward infant mortality by Franz and FitzRoy (2006). In Central Asian Republics, they show that high mortality is attributable to the poor environmental health factor of the region to the extent that 71 per cent of additional mortality occur because of being situated in that region.

Günther and Fink (2010) compared countries, which includes the Philippines, for the relationship of sanitation to infection and mortality. Although they raised an issue on the magnitude of effect when compared with meta-studies, they do confirm that unimproved or undeveloped sanitation facility has detrimental effect on the infant and children in general.

2.5.3. Nutrient deficiency

Nutrition plays a role in the health of an infant even in the womb. This is determined through the birth weight of infants as observed by Cramer (1987) in the United States of America where he differentiated the high-risk groups and one of the factors that affect the subsequent probability of mortality is low-birth weight. This is also observed by Matteson, Burr, and Marshall (1998) when they included in the model birth weight among other individual and community risk factors; and by Guilkey and Riphahn (1998) for the Philippines as part of their structural model analysis.

Having stunted growth for children, especially during their first year from birth, is indicative of increased risk to mortality (Bairagi, Chowdury et al, 1985). This works by being highly susceptible to infection and a general retardation in development. A study in the Philippines by Adair and Guilkey (1997) has presented that in Cebu, Philippines, stunted growth had been stunted more for males during the first year of life while it is at the second year for females. This occurred more for children who have had shorter duration of breastfeeding and by insufficient preventive healthcare behaviour. Identifying it with the outcome on morbidity is insufficient. As Arimond and Ruel (2004) explored for countries in Asia, mortality risks are increased if breastfeeding is provided for less than two years from birth.

2.5.4. Personal illness

Addai (2000) studied maternal and child health service utility in Ghana. This includes applying multivariate techniques on outcomes of antenatal consultations with a doctor. He iterates that doing such a study is a way toward understanding ultimately, the factors behind high maternal and infant mortality levels in the country.

This stress on maternal and child preventive illness behaviour encompasses antenatal and postnatal visits to trained professionals with regard to the mother and her infant. These behaviours have been shown to improve the child's survival. As Maitra (2004) studied for India, a woman's education has a strong effect toward utility of healthcare

services for the mother and her child; and this in turn improves infant mortality levels. In the Philippine context, a study (Guilkey and Riphahn 1998) included the curative, or the postnatal doctor visits, to determine its effect as well as antenatal care utility.

A related important aspect of such healthcare services utility is the appropriate immunisations for both mother and infant. A study in Sub-Saharan Africa (Fotso, Ezeh et al, 2007) examined the context of children in urban areas with regard to resistance to infections to which immunisation is central. They observed that child survival improves with immunisations but there are disparities within and between countries' cities when inter-urban comparisons are made. In a district of Bangladesh, it is also observed that such immunisations are helpful in combatting infant and child mortality (Mondal, Hossain et al, 2009).

This has been a requirement in the Philippines for pregnant women to have safer birthing because it prevents certain infections based on the Department of Health, DOH, programme guideline (DOH 2011). It has been shown in literature that, receiving inoculation, tetanus toxoid specifically, allows the infant to avoid being infected by other diseases (Singh, Pallikadavath et al, 2012). Other than the mother's antenatal care, the infant's own schedule of inoculation would also bear importance to his general health. The Department of Health in the Philippines follows international standards which require specific drugs to be administered at the proper timing within the first year of life (DOH 2011).

Even with the said guidelines of the government, there are indications that it is still not practiced by many; therefore, it is important to determine its effect on infant survival over the years.

2.6. Reflection from the review of literature

Observable in the literature survey is that studies in the Philippines have shortcomings in terms of availability. There are studies relating to the factors as outcomes by themselves as with nutrition status, antenatal care utility, and birth interval among others; but in the context of being together as determinants themselves, this may be another important aspect to consider to understand what affects infant mortality in the country over time. It is then deemed apt to employ an adaptation of the conceptual framework of Mosley and Chen as the foundation for infant mortality analysis.

2.7 Conceptual framework

What is proposed for this research is an adaptation of this framework to reflect the experience of the Philippines (Figure 2.2.). Also, adaptation here is appropriate because there are aspects of society that may have changed over the years since the inception of the framework; as the case of antenatal care. It had been indicated in the literature, there has been a lack of clear and consistent index to measure the extent of good

quality antenatal care a mother is receiving (Alexander 2001). Therefore an appropriate guide to this is using the programme of the Philippine government as lead. The DOH in the Philippines bases its antenatal programme on the World Health Organization's, WHO, guidelines which include counselling for new mothers and consultations regarding mothers' health status; also detection of complications as HIV/AIDS are key which had been reiterated in the recent decade (DOH 2009). Some components of these guidelines are found in the 2008 NDHS but there are those that are excluded because of their absence in the dataset such as the height of the mother and her blood pressure record, among other issues. This is an example of what changes a variable may have had since the conceptualisation of the framework where antenatal care is a collapsed, unspecified determinant.

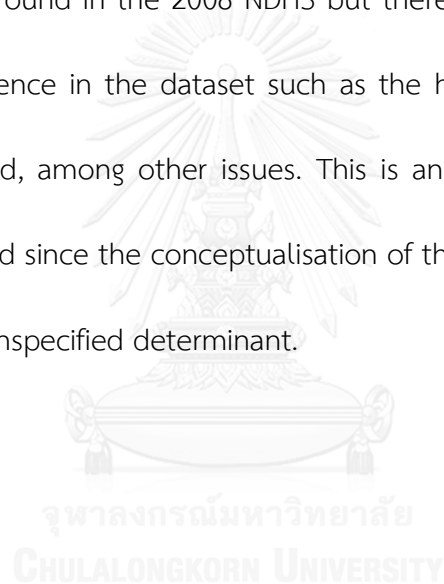
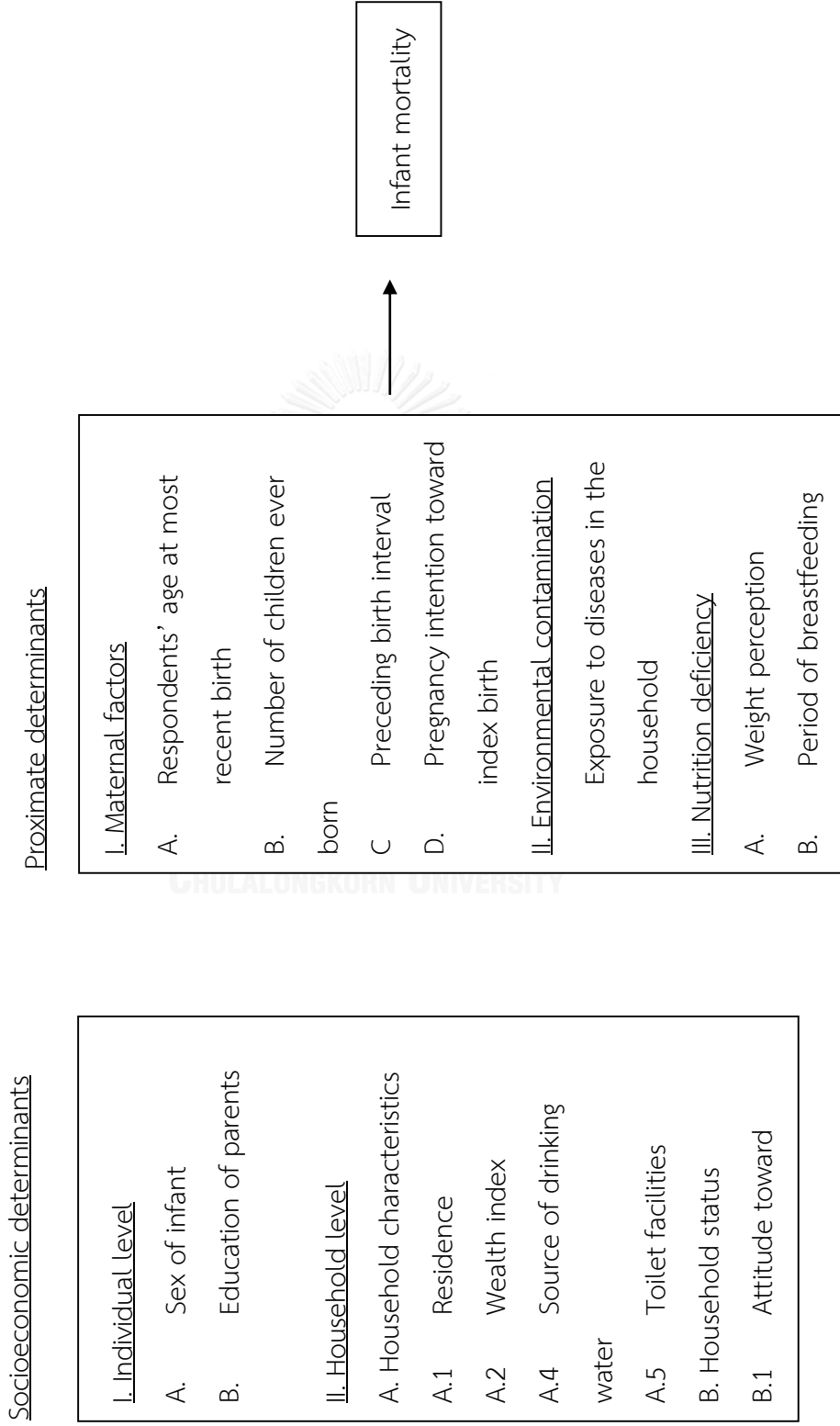


Figure 2.2: Adaptation of Mosley's and Chen's (1984) proximate determinants of infant mortality for the Philippines



Chapter 3

Data and methods

Presented in the following are the data sources for the study: the two most recent National Demographic and Health Surveys, NDHS's, available for the Philippines in 2003 and 2008. A brief background on data collection is presented first, followed by the operationalization of the variables based on the conceptual framework.

3.1. Data and sample design

Demographic and Health Surveys are nationally representative, population-based household surveys which provide comparable country data on health indicators. For the Philippines, the National Statistics Office conducts the National Demographic and Health Survey, NDHS, with the technical assistance by ICF Macro International through their MEASURE DHS programme. Funding for these surveys comes from the Philippine government with financial support from US Agency for International Development.

The 2003 NDHS utilised the master sample based on the latest census which at the time was the 2000 Census of Population and Housing, CPH. The sample is intended to be representative of the national level; urban and rural locations; and the 17 regions

of the country representing geopolitical administration. A three-stage cluster sampling was employed. The first stage, 819 primary sampling units, PSU's, were selected proportional to the number of households within a *barangay* or contiguous barangays based on the 2000 CPH. The *barangay* is the smallest administrative area in the Philippines and the equivalent is the concept of the 'village.' The second stage involves the selection of enumeration areas, EA's, that was proportional to the number of EA's. An EA is defined as an area with specified boundaries consisting of around 150 households. In the third stage, an average of 17 households were selected using systematic sampling within each EA. After the process, the final sample was yielded from 12,586 households which represents a 99% response rate. These households include a total of 13,945 women aged 15 through 49 years.

The 2008 NDHS follows the same sample design and implementation as the 2003 NDHS where 12,469 households were successfully enumerated depicting a 99 per cent response rate. Within these households, 13,594 women from within the same age range of 15 through 49 years are interviewed. These supplementary information are accessible online at the DHS website www.measuredhs.org together with the corresponding data sets which are downloadable after submitting a request through the same platform.

3.2 Background on data enumeration and questionnaire

The purpose of the NDHS over the years had been to provide policy makers and programme managers demographic and health surveillance data. This is conducted in developing countries to improve health surveillance in a population particularly information on fertility levels and preference, awareness and use of family planning, breastfeeding practices, marriage, nutrition status of women and children, maternal and child health, childhood mortality, knowledge and attitudes regarding HIV/AIDS, and violence against women.

Since 1968, enumeration had been performed every five years. Specifically for the 2003 NDHS, fieldwork is from June to September 2003. This is the sole NDHS to have had a questionnaire for 5,000 men aged 15 to 54 years. For the 2008 NDHS, the period for fieldwork is August to September 2008. Because of the ethnolinguistic composition of the country, the questionnaires are initially prepared in English but are available otherwise in six major languages namely: Tagalog, Cebuano, Ilocano, Bicol, Hiligaynon, and Waray.

Two main modules are found similar for 2003 and 2008 NDHS's. Firstly, the household questionnaire lists the information on the members of the household as well as the features of the household. Furthermore, it is in this module where the incidence of non-communicable disease incidences as well as infectious diseases incidence are noted. The second module is the Women's questionnaire that covers

the topics of: background characteristics, reproductive history, and knowledge of family planning methods among health issues.

The Men's questionnaire was only used for 2003. While in 2008, a new module for a sub-sample is introduced – the Women's safety module. The latter module covers experience of violence of any nature the respondent may have received whether from her spouse or other people.

3.3 Operationalization of variables

The following section presents the scheme to which the variables are presented through manipulation of the data. A few of the following measures warrant further expounding therefore sub-sections are created for these factors.

3.3.1 Outcome variable: Infant non-survivorship

The outcome variable is infant mortality defined as whether or not an infant survives a year after being born. As a standardised instrument, the DHS reports complete birth histories of women aged 15 to 49 years found in Items 217 and 221 (Appendix 5). The sample considered for the study is limited to the last child born to every woman therefore, each mother is only represented once. This infants belonging to this sample from here will be referred to as the index child or index infant. Censored in the sample are those born 12 months prior the surveys. If a woman's most recent delivery

occurred in the period 12 months prior the survey, her immediately preceding birth, if any, is included. The resulting sample size is 3755 infants for the year 2003 and 3499 infants for 2008.

3.3.2 Explanatory variables

This sub-section is divided into the previously indicated dichotomy of Socioeconomic determinants and Proximate determinants.

3.3.2.1 *Socioeconomic determinants*

The factors included here, as described in the conceptual framework, concern individual and household measures of the samples.

A. Individual level

For the background variable

1. Sex of the infant (Item 219, Appendix 5) is the first individual-level variable where the reference is female.
2. The ones identified by Mosley and Chen (1984) will be utilised particularly the level of education of the respondent and her partner; and residence are included. Education of both father (Item 804, Appendix 5) and mother (Item 109, Appendix 5)

may have an effect on the health and survival of the index child. The parental education variables are based on attainment which may be indicative of qualification rather than the duration of studies. The reference category involves those with at least primary education or none at all.

Regarding the education level of the father, there had been missing values for both years but these are very few cases. As this happens to only a few instances on other variables, imputation is done for all respective events. In this instance, it is imputed through the education of the mother as well since they exhibit very similar patterns for the general population and would be representative of the sample.

B. Household level

Household-related measures concern the characteristics as residence; and also the household status of the members of said unit particularly the respondents who are the mothers of the infants in the sample.

B.1 Household characteristics

1. Under the household-level domain, residence pertains to whether the household hails from a rural or urban area. This is based on Item 102 (Appendix 5)
2. Socioeconomic status, SES, is referred to as the wealth index based on the survey. This is the index constructed from incorporating variables relating to the

household possessions, housing type, and materials among others. This is different from Mosley and Chen's because they intended for the use of household income but this is not elicited in the DHS; which is a standardised survey instrument. The index values are prepared and is readily available for each respondent and therefore allows data users to manipulate it freely for categorization. For the current study, this measure of SES is prepared as three quantiles: (1) the reference category of 'Low SES' which is at the bottom tercile of the household wealth, (2) the average consists the 'Middle SES', and (3) the highest tercile indicated as 'High SES.' For the transformed variable, the lowest factor based on the wealth index values in the year 2003 is -173922 and the highest factor pertaining to highest socioeconomic status is 237158. In 2008, the lowest and highest factorials are -215607 and 208812 respectively.

3. Also included in the household-level domain are the source of drinking water and toilet facilities. There is a specific list of water source and toilet facility that the World Health Organization and United Nations Children's Fund (2004) had indicated to be "Improved" and "Unimproved." For improved drinking water sources, included are piped household water connection located inside the user's dwelling, plot or yard; public taps or standpipes, tube wells or boreholes, protected dug wells, protected springs, and rainwater collection. A difference to the recommendation is to accommodate the method of obtaining clean water in the Philippines which is bottled water from refilling stations accredited by the Health Department of provinces and

municipalities as observed for both periods concerned in this study (Magtibay 2004, Israel 2009).

4. Improved toilet or sanitation facilities are: Flush/pour flush to piped sewer system septic tank, or pit latrine; ventilated improved pit latrine, pit latrine with slab, and composting toilet. “Unimproved” category for both are any other unmentioned.

B.2 Household status

Household-status measures are those that concern primarily the autonomy of women which may have an effect on the survival of infants to their respective first birthdays. Household decision-making is the first component and it is the experience of the wife on who performs the decisions on matters that include the purchase of small and large items; going to a health facility, and visiting friends and relatives. Attitude toward intimate partner violence, or IPV, is the justification of the respondent on physical violence when she burns the food, ignores their children, and refuses sex. A set consisting of five variables regarding women’s autonomy will be examined in this study to see the influence upon the infant mortality in the Philippines. The four of these variables are subsumed as household decision-making autonomy and the remaining one other is on the attitude toward IPV.

B.2.1 Attitude toward Intimate Partner Violence (IPV)

In this study, attitudes toward IPV refer to the justification of women in the circumstance of a man beating his wife. Their opinion is to be elicited by asking generally all women the hypothetical mention of “...some imagined situations... please tell me if it is justifiable for a man to hurt”. The situations are based on Item 828 in the questionnaire (Appendix 5):

- **If she goes out without telling him**
- **If she neglects the children**
- **If she argues with him**
- **If she refuses to have sex with him**
- **If she burns the food**

An index will be created for this variable where the responses are counted to reflect the lack of justification toward IPV. This is done with a Cronbach’s alpha of about 0.85 for the five individual variables from the survey. A dichotomous variable is created where one ‘1’ is the absence of such rationalization for any scenario and zero ‘0’ represents having justified at least one of them.

B.2.2 Household decision-making capacity

The respondent is asked who usually makes decisions related to the following domains:

1. Going to health facility (Item 823, Appendix 5),
2. Making large purchases (Item 824, Appendix 5),

3. Purchasing daily needs (Item 825, Appendix 5), and

4. Visiting relatives or friends (Item 826, Appendix 5)

For each domain, the response options are: decisions done by the respondent alone, jointly with her partner, husband alone, and someone else.

Because each of the variable tests different domains after the test of variability where the Cronbach's alpha is less than 0.6, they will bear four independent variables. The responses are coded into two categories of (1) the respondent having a level of autonomy and (2) being constrained. In the category (1), the options of decision done by the respondent alone and jointly done with partner are merged because it specifies the involvement of the woman in the decision-making process. For category (2), all the options that do not involve the woman are included. This is similar to what Acharya, et al. (2010) had done in their study.

There had also been missing values for this set of variables but as in the case of the father's education, it is at the bare minimum with less than 15 cases. For this set of variables, they had been imputed based on the justification of IPV according to its original configuration and not the transformed variable.

3.3.2.2 *Proximate determinants*

The following measures as indicated previously are the health-related behaviour and status of the infants and the respondents to the survey.

A. Maternal factors

On the proximate determinants, there are also substantial conceptual considerations based on the framework. Maternal factors include age, parity, birth interval, and pregnancy intention. These are factors that have been shown to affect the health of the infant; which if shown to be below par subsequently lead to death.

1. The age of the mother for this purpose would reflect her age at the time of the birth of the index child. This is possible from the century-month coding done for the mother and each of her children. This information is on the questionnaire's Item 106. This is categorised into three; 24 years and younger to represent youth pregnancies, 25 through 35 years, and 36 years and older to represent older mothers. These categories are based on the maternal and child health implication based on age groups where women's health are at risk during their youth and older ages (Lampinen, Vehviläinen-Julkunen et al 2009, WHO 2011).
2. Another maternal factor is the parity or the number of children ever born (Item 202 to 206, Appendix 5); which as described in preceding sections, may have cultural

bearing in the context of the Philippines (Alcantara 1990). Also, infants born with the mother's response whether it is from an unintended pregnancy or a planned pregnancy is another factor.

3. Birth interval is extracted from the mentioned data treatment as well. The birth preceding the index child's is important because this may influence the health of the latter child. According to WHO study (2005), having intervals of six months or 18 months bear different outcomes from the recommended 24-month spacing between births. Therefore, the measures would be 'Risky' for the six-month spacing; 'Less risky' for the 18-month interval; and 'Optimal' for the recommendation.

4. Pregnancy intention bearing the index infant is measured through a dichotomous variable with the reference being unintended pregnancy.

B. Environmental contamination

Environmental contamination is the factor that exhibits the propensity for environmental risks; and it has been shown in Philippine data that the leading causes of infant deaths are infections (NEC 2009). Risks are to be determined through the questions regarding exposure to infections brought on by having colds, cough, fever, diarrhoea, and flu (Items 514, 530, and 531, Appendix 5). These may or may not be the disease itself as tuberculosis that can cause mortality but these are basic symptoms of particularly general diseases. These will be transformed into a

dichotomous variable that relates to the presence of even one complication or none at all.

C. Nutrition deficiency

1. On the factor of nutrient deficiency, malnutrition is seen as a high risk and is indicative of infant mortality. This is elicited through question toward the mother on the description of her most recent infant's weight (Item 432, Appendix 5). According to literature, this question is highly correlated with actual figures therefore in the absence of such data, this is an apt substitute (Meegama 1980).

2. Another factor included is the breastfeeding duration (Items 461 to 468, Appendix 5), whether it is performed the entire period or not. The sufficient period would be at least one year from birth (WHO 2009). A note to the construction of this measure is that an infant who dies before reaching the first year from birth but is still being breastfed is categorised as belonging to the sufficient period otherwise, if this were to occur, all the infants who pass away would be grouped into the insufficient period and the data will be skewed.

D. Illness control behaviour

Personal injury assumes two categories on the Mosley and Chen (1984) framework; but for this study, this will be under the one domain of control of illness whether preventive or curative. For the mother's control of illness; it will include antenatal

consultation, her tetanus toxoid inoculation, and her choice of health service provider. On the part of the infant, the completeness of prescribed inoculations are also measured.

1. The measure of antenatal care adherence is from Items 410 and 411 (Appendix 5) is extracted from which respondents are asked if they had availed of such service for the index child and how often for the duration of her pregnancy. Based on WHO standards (2003), there is a certain adequacy that is ascertained categorised into three levels of Adequate, Intermediate, and Poor care. For the current study's sample, those who receive Poor care is rather small in number therefore it is integrated with the Intermediate care generating a dichotomous category as follows:

- a. Adequate care: When women receive care in the first trimester and had five or more antenatal visits
- b. Inadequate care: When it is 'poor care' where there is no care or only one visit, or who had the first visit in the third trimester and fewer than five visits; or even, "intermediate care" where other permutations not within the previous two categories of 'adequate' and 'poor' care

2. On type of birth attendant (Items 408 and 435, Appendix 5), five categories are included particularly: Doctor, Nurse/Midwife, *Hilot*, Other, No one. *Hilot* is a traditional provider of maternal care in the country. She is trained in traditional beliefs and utilises

alternative medicine for the most part of her practice. Because of WHO guidelines on proper care (2003), skilled birth attendants are the professionals: doctors, nurses, and midwives. The 'Other' category means other than the previous categories which may be traditional nuances because of the Philippines' multicultural society.

3. Tetanus toxoid inoculation from Item 422 (Appendix 5) has been a requirement in the Philippines for pregnant women to have safer birthing because it prevents certain infections based on the Department of Health programme guideline (DOH 2011). It is categorised to not being inoculated (as the reference) and being inoculated. This measure represents all the tetanus toxoid inoculation a mother has had because a woman may have multiple immunizations spaced out with specific duration (WHO 2006). This specification is unavailable for the NDHS's therefore only the total history is represented here as the proxy for sufficient tetanus toxoid inoculation schedule.

It has been shown that before the baby is born, consultations lower the risk of it dying. And even when the infant is born, mothers who consult affect the child's health status by being able to provide immediate remedies or whatever the apt attention the infant requires. Immunization is also included because according to Philippine law, tetanus toxoid is required although it is not practiced by all. It has been shown in literature that, receiving such drug allows the infant to avoid being infected by other diseases (Singh, Pallikadavath et al, 2012).

4. Other than the mother's antenatal care including the vaccination of tetanus toxoid (Item 506, Appendix 5), the infant's own schedule of inoculation would also bear importance to his general health. The Department of Health in the Philippines follows international standards which require specific drugs to be administered at the proper timing within the first year of life (DOH 2011). There are six '6' vaccinations: Bacillus Calmette–Guérin vaccine, BCG, which is for tuberculosis is to be administered at the first month from birth, the Diphtheria, Pertussis, and Tetanus, DPT, I and II which are to be vaccinated to six- to sixteen-week old and fourteen-week to six-month old infants respectively; the Oral Polio Vaccine, OPV, I and II which have the same timing of administration as the DPT's I and II; and lastly, the Measles Vaccine to be introduced between the eighth and twelfth month of life.

This variable will be shown as dichotomous, whether incomplete or complete immunization where the latter refers to being able to follow the above schedule. Furthermore, because of such schedule, it is applicable to indicate completion based on the timing of death of the index child as well. The distribution will be inaccurate if a baby who had died prior receiving a certain inoculation would be counted as 'incomplete', i.e. if the infant passed at the second month therefore he would not receive DPT II, OPV II, and the Measles vaccine. What was done was to count these infants as having 'completed' the inoculation schedule depending on the time of their

death which is possible because the response of the mother includes the timing of vaccination.

3.4. Analytical method

The analysis will be presented with descriptive statistics of infant mortality and its expected determinants as frequencies and summary statistics together with tests as chi-square and t-test where applicable. A test of multicollinearity is applied as well before proceeding with the analysis of regression models. Binary logistic regression is employed to test which among the socio-economic, household autonomy, and proximate determinants have a significant relationship toward the outcome of infant survival or mortality. Logistic regression is apt for this study because the survivorship status of the infants in the sample can be linked with multitude characteristics of the infant him- or herself, the parents' characteristics, and the household distinctions. These methods are performed separately for the periods covered by 2003 and 2008 for temporal comparison. For all the statistical treatment utilised for the analysis, the significance level where $\alpha=0.1$ is the highest value accepted.

For the analyses, the sample weights of NDHS are utilised. These are probability weights that denote the probability that a case was designated into the sample from the population. The sample weights in both 2003 and 2008 NDHS are eight-digit

variables with six (6) implied decimal places. They are normalised so the weighted number of cases matches the non-weighted number of cases when the full data set is used without selection.

To test the real effect of inclusion of proximate determinants based on the framework, two models for each of the outcome are presented. The first model for each includes the socioeconomic variables and the second models that have the proximate determinants. What is analysed are the logistic regression models with unweighted data. This is decided upon performing both regression analyses with data that are weighted and non-weighted for the 2003 and 2008 samples. It is observed that there are significant differences between the coefficients and standard errors of the two types of analyses therefore the use of regression analysis with unweighted data to avoid results with high variance.

Since the analyses are on parameter estimates, the Wald test being a multiple significance test method is employed to determine the associations between the variables in the model (Koch, Freeman, and Freeman, 1975). This is performed to test the significance of the inclusion of regressors within the set of proximate determinants compared with analysing infant mortality predictors limited to socioeconomic determinants. Another test on the estimation of the coefficients employed here is the likelihood ratio test, or the LR test. This is done together with the Wald test to show appropriateness of the nested models. The LR test the likelihood of obtaining the

data when the parameter is null with the likelihood of obtaining said data at the maximum likelihood estimation of the parameter. (Bezwick, Cheek, Ball 2005). For the current study's purpose, this is to gauge the impact of the inclusion of the proximate determinants after limiting the model only to socioeconomic determinants.

Another test that is conducted is a type of goodness-of-fit, GOF, test for fitted models. This technique tests the setting of a model to present how sound it describe the outcome. This GOF examines the values predicted in the model and its proximity to observed values. According to Archer and Lemeshow (2006), the Hosmer-Lemeshow goodness-of-fit test is usually employed to obtain the statistic for fitted models and is apt for non-weighted regression models. The strength of this test compared with a regular χ^2 GOF test is that it partitions the observations into groups with almost equal distributions avoiding the prospect of having groups with low frequencies whether observed or expected.

Chapter 4

Results and discussion

The following chapter presents the results and the respective discussion. The specified methods of analysis are offered in the succeeding section. In the discussion, there are additional presentations of figures to support further investigation as necessary.

The results of the analysis are divided into the following sections: (4.1) description by socioeconomic characteristics, (4.2) description by proximate determinants by infant mortality and, (4.3) the analysis of determinants on infant survivorship.

4.1. Sample socioeconomic characteristics

This section presents individual and household characteristics of the infants in the sample. Succeeding this is the description of the infants' mothers' status in the household. After the sample characteristics, the bivariate analyses of these socioeconomic characteristics with infant mortality.

4.1.1. Individual and household characteristics

With the sample used in this study, about half (50.7%) are male infants in 2003 and in 2008, there are about 53 per cent as expressed in Table 4.1. A minimal fraction of the samples was not able to live until their first birthdays, 2.1 per cent in 2003 and 1.9 per cent in 2008.

The sample on 2003 bears the characteristic where majority (42%) have attained secondary level of education while those who have at most primary level and those who finished tertiary education are at almost equal proportions at 29 per cent and 28 per cent respectively. This pattern is the same for the 2008 sample. There are differences in education level for fathers in the sample. For 2003, those at primary education at most and at the secondary level are about 35 per cent each. In 2008, a difference is observed whereby there are more who have done secondary schooling (40%) than those having had primary education (31%). Fathers who have had tertiary level of schooling has the similar percentages at slightly less than 29 per cent.

There are marginally more households in the urban (51.3%) than in the rural areas (48.7%) in 2003. Most of the households also belong to lower income category (42.7%). The water source of a majority is of improved type (92%) and these households have an improved sanitation facility as well at about 81 per cent.

In 2008, half of the sample is from the urban area (50.5%) and mostly hail from low socioeconomic capacity (39.5%). The households with unimproved water sources are at 11 per cent and a segment have unimproved sanitation facility at around 18 per cent.

4.1.2. Gender status characteristics of mothers

The Philippines had been continuously improving in recent years its standing on gender equality according to the United Nations Development Programme (2013)

although, this does not translate to being exhibited in all domains of lives of women they noted. As presented in Table 4.2. in the 2003 column, many women justify intimate partner violence, IPV, (71.8%) and are not involved in decision making in the household with the least being about 75 per cent with regard to decisions on making large purchases. The sample in 2008 also shows majority justifying wife-beating (83.3%) and the lack of involvement in decision-making. Noticeable is the different reports among the sample between 2003 and 2008. The justification of IPV and non-involvement in decision on going to health facility by the respondent is higher in 2008. The other decision-making factors display, on the other hand, higher involvement of respondents in the sample of 2008 than in 2003.

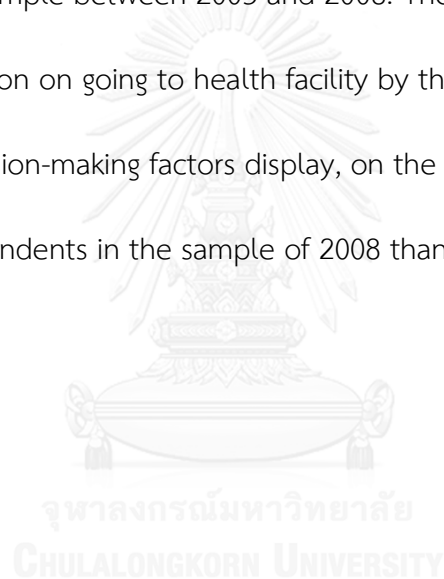


Table 4.1: Description of infants born prior survey enumerations in 2003 and 2008 by individual and background characteristics

	2003		2008	
	Per cent	Sample size	Per cent	Sample size
<i>Infant survivorship</i>				
Passed before the age of one	2.1	80	1.9	68
Survived	97.9	3675	98.1	3431
<i>Sex of infant</i>				
Female	49.3	1852	47.2	1652
Male	50.7	1903	52.8	1847
<i>Education of parents</i>				
Mothers' education level				
No education and primary	29.9	1123	24.5	856
Secondary	42.1	1580	47.2	1651
Tertiary	28.0	1053	28.3	992
Spouses' education level				
No education and primary	35.3	1327	31.0	1086
Secondary	36.2	1359	40.3	1411
Tertiary	28.5	1069	28.6	1002
<i>Household characteristics</i>				
Residence				
Rural	48.7	1829	49.5	1733
Urban	51.3	1926	50.5	1766

Socioeconomic status				
Low	41.7	1567	39.5	1382
Middle	32.6	1225	33.9	1187
High	25.6	962	26.6	930
Water source				
Unimproved	7.6	284	11.0	387
Improved source	92.4	3471	89.0	3112
Sanitation facility				
Unimproved	19.2	722	18.2	637
Improved facility	80.8	3033	81.8	2862
Total number of infants		3755		3499

Source: 2003 and 2008 NDHS data

Table 4.2: Description of household status of mothers of sample infants on 2003 and 2008

	2003		2008	
	Per cent	Sample size	Per cent	Sample size
Attitude toward violence by partner				
Justifies beating	71.8	2697	83.3	2915
Does not justify wife	28.2	1058	16.7	584
Decision on going to health facility				
No involvement	6.5	243	12.9	453
Respondent is involved	93.5	3512	87.1	3046
Decision on making large purchases				
No involvement	24.6	923	20.3	711
Respondent is involved	75.4	2832	79.7	2788

Decision on purchasing daily needs				
No involvement	16.4	616	14.3	502
Respondent is involved	83.6	3139	85.7	2997
Decision on visiting relatives or friends				
No involvement	15.8	592	14.2	498
Respondent is involved	84.2	3163	85.8	3001
Total number of infants		3755		3499

Source: 2003 and 2008 NDHS data

4.1.3. Distribution of infant survivorship by socioeconomic factors

A bivariate analysis is presented in this section on socioeconomic determinants to infant mortality. Because of the nature of the data presented as being weighted or IID, independent and identically distributed, the measure of association is an F statistic. This is based on the Rao and Scott correction (1984, 1981) where the p-value remains the same as the Pearson χ^2 statistic of the distribution but it considers the adjustment for population statistics. Therefore, the significance is interpreted similarly, but the value presented here and subsequent bivariate analyses are F statistic instead of Pearson χ^2 .

Parental education is viewed in the literature as beneficial to the health of their children (Breierova and Duflo 2004). Many infant deaths are experienced by mothers with primary education at most (3.7%) as well as fathers with the same level (3.6%) in 2003 (Table 4.3.). Household location indicates statistically significant difference ($F=3.87$, $p<.05$) where situated in rural areas experience more infant mortality (2.6%). Having low socioeconomic status is also higher in infant deaths at about 3 per cent than with high SES (0.8%). This is also the case for those who have lack of proper, improved sanitation facility where over 3 per cent have infant deaths.

In 2008, sex of infants is not statistically different between each category as in 2003 where male infant deaths are above 2 per cent in both years and below that level for the same periods. For 2008 still, maternal education level remain significantly different ($F= 6.08$, $p<.05$) whereby those with no education or at primary level have more infant deaths at about 3 per cent and those with tertiary education experience less than 1 per cent. Infant deaths by fathers' education levels bear a similar pattern as with the mothers'. Although location of residence is not significantly different, the other characteristics as having low SES (3.0%) and the lack of proper sanitation amenities (3.8%) have significantly higher infant deaths.

Table 4.3: Percentage of infant deaths by socioeconomic and proximate determinants, 2003 and 2008

	2003		2008	
	Infant deaths	Sample size	Infant deaths	Sample size
Sex of infant				
Female	1.99	37	1.66	27
Male	2.27	43	2.19	40
	F = 0.31		F = 1.29	
Mothers' education level				
No education or primary	3.72	42	2.96	25
Secondary	1.85	29	2.18	36
Tertiary	0.85	9	0.65	6
	F = 10.25***		F = 6.08**	
Spouses' education level				
No education or primary	3.56	47	3.08	33
Secondary	1.52	21	1.9	27
Tertiary	1.171	13	0.797	8
	F = 8.76***		F = 5.85**	
Residence				
Rural	2.64	48	2.30	40
Urban	1.65	32	1.59	28
	F = 3.87**		F = 2.147	
Socioeconomic status				
Low	2.92	46	2.98	41
Middle	2.12	26	1.64	19
High	0.86	8	0.77	7
	F = 5.21**		F = 6.30***	
Drinking water source				
Unimproved	2.00	6	1.51	6
Improved source	2.14	74	1.99	62
	F = 0.03		F = 0.46	
Sanitation facility				
Unimproved	3.46	25	3.77	24
Improved facility	1.82	55	1.53	44
	F = 7.34**		F = 13.57***	
Total number of infants who passed	80		68	

Source: 2003 and 2008 NDHS data

Note: *** Significance level of 1 per cent **Significance level of 5 per cent *Significance level of 10 per cent

As observed in Table 4.4. on the 2008 column, justifying IPV exhibits significant lower infant deaths ($F=4.89$, $p<.05$) at almost 2 per cent compared with those who do not justify it (3.1%). Women being involved in the decision to go to a health facility also experience lower infant deaths (1.8%).



Table 4.4: Percentage of infant deaths by women's status in the household, 2003 and 2008

	2003		2008	
	Infant deaths	Sample size	Infant deaths	Sample size
Attitude toward violence by partner				
Justifies beating	1.88	51	1.71	50
Does not justify IPV	2.76	29	3.07	18
	F = 2.63		F = 4.89**	
Decision on going to health facility				
No involvement	1.11	3	2.98	13
Respondent is involved	2.20	77	1.78	54
	F = 0.96		F = 2.85*	
Decision on making large purchases				
No involvement	1.63	15	2.42	17
Respondent is involved	2.30	65	1.81	51
	F = 1.33		F = 1.09	
Decision on purchasing daily needs				
No involvement	1.28	8	2.27	11
Respondent is involved	2.30	72	1.88	56
	F = 2.22		F = 0.32	
Decision on visiting relatives or friends				
No involvement	1.50	9	2.75	14
Respondent is involved	2.25	71	1.80	54
	F = 1.25		F = 1.84	
Total number of infants who passed	80		68	

Source: 2003 and 2008 NDHS data

Note: *** Significance level of 1 per cent **Significance level of 5 per cent *Significance level of 10 per cent

4.2. Sample characteristics by proximate determinants

This section presents the description of characteristics based on the proximate determinants of infant mortality. These factors include health characteristics and behaviour of mothers and the infants. The first part is the sample description and afterward the bivariate analysis with infant survivorship.

4.2.1. Distribution of sample by health characteristics and behaviour

Based on NDHS data between 2003 and 2008, the median age at birth of Filipino women had remained at about 23 years (NSO and ICF Macro 2004, 2009). According to the sample here, the mean age of mothers when they birthed in 2003 is 28.4 years. Table 4.5. presents a majority of women who birthed between 20 to 34 years where the most occurred for those aged 25 to 35 years (51%). The mean number of children of women is three (3). Many also had either their first born or their second child (45.6%). Infants being borne in a risky birth interval of less than six months are predominant at 42 per cent as well as being an intentional birth at about 53 per cent.

These patterns are observed in 2008. Most births belong to the age group 25 to 35 years (47.2%) and that mean age of mothers who gave birth is 28.2 years. Majority of births are first- or second-born at almost 50 per cent and that the mean parity is

three (3) still. Births are still at most in the risky interval category (37.0%) and are intentionally conceived (61.4%).

According to the Global Health Initiative (2013), the Philippine health system response to alleviating diseases and infections had improved in the recent decade but is still working on furthering this goal. This system is the aggregate of all health indicators that may affect infection prevention and other positive health behaviours. Among the households in the sample in 2003 of the current study, 52 per cent had lack of presence of infections in their immediate vicinity (Table 4.6.). A number of mothers had inadequate antenatal care (54.7%) and at the time of birth, a majority were attended by a skilled, medical practitioner at around 94 per cent. The health status of infant at birth is majorly on the average based on the perceived weight (60.9%). Numerous mothers availed of tetanus toxoid vaccine prior pregnancy (71.0%) and the infants that had completed their schedule of inoculations is about the same level (74.6%).

In 2008, households with the presence of infection remain about same level at 55 per cent. A quarter of the infants in the sample are born large and a fifth are born small. Sufficient antenatal care is availed of about 50 per cent of the mothers and 80 per cent were attended by medical professionals. The immunisation behaviour of mothers in the 2008 sample is about the similar pattern as 2003 whereby tetanus

toxoid is at 79 per cent and infants' immunisation completion is at around 84 per cent.

Table 4.5: Description of infants born prior survey enumerations in 2003 and 2008 by mother's status in the household

	2003		2008	
	Per cent	Sample size	Per cent	Sample size
Mother's age at most recent birth				
Below 25	32.0	1202	24.5	856
25 to 35	51.0	1915	47.2	1651
36 and above	17.0	638	28.4	992
Number of children ever born				
1 to 2	46.6	1750	49.3	1723
3 to 4	29.2	1095	29.9	1044
5 to 6	13.2	494	12.3	430
7 and above	11.1	416	8.6	301
Preceding birth interval				
First birth	23.3	876	27.1	949
Risky	42.0	1576	37.0	1295
Less risky	16.2	608	17.0	596
Optimal	18.5	695	18.8	659
Pregnancy intention				
Unintended	46.7	1753	38.6	1352
Wanted	53.3	2002	61.4	2147
Total number of infants		3755		3499

Source: 2003 and 2008 NDHS data

Table 4.6: Description of infants born prior survey enumerations in 2003 and 2008 by mother's status in the household

	2003		2008	
	Per cent	Sample size	Per cent	Sample size
<i>Environmental contamination</i> Exposure to diseases in the household				
None	52.5	1971	55.2	1931
Presence of infection	47.5	1784	44.8	1568
<i>Nutrition deficiency</i> Weight perception				
Small	18.8	705	20.1	702
Average	60.9	2287	54.4	1902
Large	20.3	763	25.6	895
Period of breastfeeding				
Insufficient	67.2	2524	39.3	1373
Sufficient	32.8	1231	60.7	2126
<i>Illness control behaviour</i> Antenatal care adherence				
Inadequate	54.7	2053	49.3	1724
Sufficient	45.3	1702	50.7	1775
Birth attendant				
Other	5.9	221	19.4	680
Skilled	94.1	3534	80.6	2819

Tetanus toxoid inoculation of mother				
Did not receive tetanus toxoid	29.0	1090	20.8	728
Received tetanus toxoid	71.0	2665	79.2	2771
Infant immunisation completeness				
Incomplete	25.4	956	16.2	567
Complete	74.6	2799	83.8	2932
Total number of infants		3755		3499

Source: 2003 and 2008 NDHS data

4.2.2. Health characteristics and behaviour by infant survivorship

As women come to later ages, they become less capable of bearing children and their higher age may affect their health as well as their infants' (Gyimah 2002). This is observed for the samples for both years of 2003 and 2008 where the highest percentages of infant deaths are in the advanced age groups in terms of reproductive years (Table 4.7). In 2003, the age group 36 years and over is significantly higher at almost 6 per cent. In 2008, the highest infant deaths are among those who gave birth at ages 36 years and above (3%).

Higher fertility among individual women had also been shown in the literature to be detrimental to infant health (Kembo and van Ginneken 2009). The 2003 sample depicts a significant difference between parity categories ($F= 7.62, p<.001$) where the category of infants born as the seventh child or beyond that have 5 per cent deaths. Although having a different pattern from 2003, the sample in 2008 still presents highest infant deaths in the most parity cases (6.4%).

Pregnancy intention shows statistically significant difference between the infant deaths for those borne intentionally and otherwise as seen on the 2003 column. 1.6 per cent of infants deemed unintentional had died and about 2.6 per cent for those deemed wanted births. In 2008, this significance is not determined where both categories are about 1.9 per cent infant deaths.

Among the environmental and health-related factors, three determinants show significance that favours survival for both years of 2003 and 2008: non-exposure to infection, proper breastfeeding duration, and completion of infants' inoculation schedule. Seen in Table 4.8., perfect correlation are obtained from the mentioned factors since no death is noted with those categories. The F statistics from these factors are noticeably higher which indicates that the magnitude of F-value indicates higher correlation with the outcome. The perception of the infant's size to indicate his weight is significantly different in infant deaths for 2003 ($F = 18.88$, $p < .001$) and 2008 ($F = 4.40$, $p < .05$) where most deaths occur among those ascribed as small at 5 per cent in 2003 and about 3 per cent in 2008. Obtaining insufficient antenatal care is significantly higher solely on 2008 where almost 3% of infants died. Having an attendant other than a medically-trained practitioner also has high share of deaths in 2003 (5.6%) and 2008 (2.9%). This pattern is shared by tetanus toxoid compliance where a little above 3% of infants died in 2003 when mothers did not receive said immunisation and in 2008, infants die at a similar magnitude (3.2%).

Table 4.7: Percentage of infant deaths by maternal factors, 2003 and 2008

	2003		2008	
	Infant deaths	Sample size	Infant deaths	Sample size
Mother's age at most recent birth				
Below 25	2.20	18	2.01	17
25 to 35	3.38	17	1.55	26
36 and above	5.88	15	3.04	30
	F = 27.57***		F = 2.40*	
Number of children ever born				
1 to 2	1.25	22	1.84	32
3 to 4	2.11	23	0.80	8
5 to 6	2.85	14	1.99	9
7 and above	5.02	21	6.38	19
	F = 7.62***		F = 12.61***	
Preceding birth interval				
First birth	1.49	13	1.98	19
Risky	2.15	34	2.50	32
Less risky	3.31	20	1.58	9
Optimal	1.86	13	1.10	7
	F = 1.760		F = 1.653	
Pregnancy intention				
Unintended	1.61	28	1.98	27
Wanted	2.59	52	1.91	41
	F = 4.11**		F = 0.017	

Total number of infants who passed	80	68
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Source: 2003 and 2008 NDHS data

Note: *** Significance level of 1 per cent **Significance level of 5 per cent

*Significance level of 10 per cent



Table 4.8: Percentage of infant deaths by socioeconomic and proximate determinants, 2003 and 2008

	2003		2008	
	Infant deaths	Sample size	Infant deaths	Sample size
Exposure to diseases in the household				
None	0	0	0	0
Presence of infection	4.48	80	4.33	68
	F = 84.24***		F = 83.11***	
Weight perception				
Small	5.21	37	2.80	20
Average	1.47	34	2.13	41
Large	1.26	10	0.84	8
	F = 18.88***		F = 4.40**	
Period of breastfeeding				
Insufficient	3.17	80	4.94	68
Sufficient	0	0	0	0
	F = 37.10***		F = 104.614	
Antenatal care adherence				
Inadequate	2.49	51	2.83	49
Sufficient	1.70	29	1.07	19
	F = 2.370		F = 13.88***	
Birth attendant				
Other	5.56	12	2.90	20
Skilled	1.92	68	1.71	48
	F = 14.32***		F = 4.31**	
Tetanus toxoid inoculation of mother				
Did not receive tetanus toxoid	3.27	36	3.24	24
Received tetanus toxoid	1.67	44	1.60	44
	F = 8.80**		F = 8.15**	
Infant immunisation completeness				
Incomplete	8.37	80	11.95	68
Complete	0	0	0	0
	F = 224.12**		F = 348.06**	
	F = *		F = *	
Total number of infants who passed	80		68	

Source: 2003 and 2008 NDHS data

Note: *** Significance level of 1 per cent **Significance level of 5 per cent *Significance level of 10 per cent

4.3. Regression models for infant mortality

The results of the binary logistic regression are presented in Table 5. The factors included based on their significance in association from the bivariate analysis for both sets of socioeconomic and proximate determinants. The level of significance here may be where $p < 0.1$ or to the lowest where $p < 0.001$. Several factors namely breastfeeding sufficiency, exposure to diseases within the household, and infant inoculation schedule completion are left from consideration from the model because of perfect correlation observed.

In Model 1 for both years 2003 and 2008, socioeconomic determinants are included. Subsequently in Model 2, proximate determinants are integrated to test if results are confounded in Model 1 and if their addition will produce significant predictors. Odds ratios are presented which indicate the chances that an outcome will occur given a certain characteristics or exposure compared with the point of reference where that specific outcome is lacking.

Before pursuing with the analysis, test for multicollinearity is done for both Models 1 and 2 for both years. Multicollinearity is detected through the Variance Inflation Factor, or VIF, which shows the degree of variance of the coefficient estimates that may be inflated. A VIF of 10, which in reciprocal terms have a Tolerance of 0.1, is an indication that a certain variable exhibits this issue (O'Brien 2007). He further explains

that a method to address multicollinearity is to define which of the other variables in the model has the highest degree of correlation based on pairwise test and weigh which may be more helpful for the aims of the research; the one that has less bearing may then be eliminated because the remaining factor may explain the outcome regardless.

The VIF results in Appendices 1, 3, and 4 present that there is no evidence of multicollinearity among the variables in the respective models and periods. The only evidence of multicollinearity is on Model 2 of 2003 (Appendix 2). The factor of the type of attendant at time of birth has a VIF of 10.9 as presented on the Primary model. It is determined that correlates with the factor of Tetanus toxoid inoculation of the mother. Upon the omission of the attendant-type at birth, there is no evidence of multicollinearity as seen on the Corrected model column of Table A.2 in Appendix 2.

Based on the Wald test on Model 2 (Table 4.9), they indicate higher χ^2 -statistics than in Model 1 where the former is about 81.0 ($p < 0.001$) in 2003 and 58.8 ($p < 0.001$) in 2008. The χ^2 -statistics for the Wald test in Model 1 are 29.4 ($p < 0.001$) and 2.4 ($p < 0.05$) for successive years.

The goodness-of-fit of the regression models for each year show differing results. For the 2003 analysis, Model 1 presents an χ^2 -statistic of 64.6 with a p-value of 0.99

which indicates no evidence of lack of fit. According to Hosmer et al. (1997), a good model fit is specified where $p \geq 0.20$. In Model 2, the χ^2 -statistic became 1916.8 yielding a significance of about 0.08 which indicate lack of fit. Model 1 for the 2008 analysis yielded a χ^2 -statistic (131.5) where the p-value (0.75) shows a fit of the model to predict infant mortality. With the inclusion of proximate determinants, Model 2 presents a lack of fit of the model (χ^2 -statistic = 2184.7, $p < 0.05$). Another test performed is on the nested models whereby the addition of the proximate determinants is tested on how it improves the model. For both 2003 and 2008, this is observed to be significant where $p < .001$.

Based on Model 1 for the year 2003, the maternal education has significant positive influence on infant survival. Mothers having secondary education increases the likelihood of an infant to survive by about 1.9 times compared with those whose mothers have primary education at most. The odds continue to increase with progressing levels of schooling with almost 2.9 times for those with tertiary education. Fathers having secondary level also increase the odds of infant survival by 1.7 times.

In Model 2 of 2003, the significant predictors have changed. The statistically significant factors for predicting survival of the infant is among those from highest parities, being a wanted pregnancy, birth-weight perception, and tetanus toxoid inoculation of the mother. When the mother of the infant have 7 children or more,

the infant's odds, or likelihood, of survival decreases by 0.4 times than having only one or two children. Being deemed borne of an intended pregnancy, infant survival's odds decrease by about 0.5 times compared with being of an unintentional nature. For birth weight, compared with being born small, infants deemed average and large at birth increases their odds of survival by 3.1 times and 2.9 times respectively. Lastly, the mother's adherence to being inoculated with tetanus toxoid prior pregnancy increases the likelihood of infant survival by 1.7 times than those without the vaccination.

There are differences in what predicts infant survival in 2008. In Model 1, having improved sanitation facility in the household increases infant survival by likelihood of about 1.6 times than those lacking in such amenity. But among the household relation factors, non-justification of IPV of the mother is observed to decrease the odds of infant survival by around 0.6 times than those who justify it.

As observed in Model 2 for 2008, non-justification of IPV by the mother remains to be significant at the same decrease in likelihood. Among proximate determinants, being deemed large at birth has the sole significance among other factors and categories which increases the odds of survival by around 2.4 times compared with being born small.

Table 4.9: Odds ratios for the effects of socioeconomic and proximate determinants on the likelihood of infant survival, 2003 and 2008

	2003		2008	
Socioeconomic determinants				
	Model 1	Model 2	Model 1	Model 2
<i>Education of parents</i>				
<i>Mothers' education level</i>				
(Ref) No education and primary	1	1	1	1
Secondary	1.94**	1.29	0.86	0.73
Tertiary	2.94**	2.07	2.01	1.56
<i>Spouses' education level</i>				
(Ref) No education and primary	1	1	1	1
Secondary	1.78*	1.55	1.33	1.23
Tertiary	1.45	1.09	2.64	2.54
<i>Household characteristics</i>				
<i>Residence</i>				
(Ref) Rural	1	1		
Urban	1.09	1.13		
<i>Socioeconomic status</i>				
(Ref) Lower	1	1	1	1
Middle	1.06	1.04	0.83	0.84
High	1.01	1.00	1.41	1.34
<i>Sanitation facility</i>				
(Ref) Unimproved	1	1	1	1
Improved facility	1.15	1.08	1.62*	1.43
<i>Women's status in the household</i>				

Attitude toward violence by partner				
Justifies beating			1	1
Does not justify wife			0.57**	0.57**
Decision on going to health facility				
No involvement			1	1
Respondent is involved			1.55	1.48



Continued. Table 4.9: Odds ratios for the effects of socioeconomic and proximate determinants on the likelihood of infant survival, 2003 and 2008

	2003		2008	
Proximate determinants				
	Model 1	Model 2	Model 1	Model 2
<i>Maternal factors</i>				
Mother's age at most recent birth				
Below 25		1		1
25 to 35		1.00		1.09
36 and above		0.55		1.05
Number of children ever born				
1 to 2		1		1
3 to 4		0.65		2.55
5 to 6		0.51		1.44
7 and above		0.42*		0.51
Pregnancy intention				
Unintended		1		
Wanted		0.48**		
<i>Nutrition deficiency</i>				
Weight perception				
(Ref) Small		1		1
Average		3.11***		1.08
Large		2.91**		2.36**
<i>Illness control behaviour</i>				
Antenatal care adherence				
Inadequate				1
Sufficient				1.42
Birth attendant				

Other				1
Skilled				0.82
Tetanus toxoid inoculation of mother				
Did not receive tetanus toxoid		1		1
Received tetanus toxoid		1.68**		1.58
Wald test	29.41***	80.99***	2.43**	58.76***
F-adjusted mean residual	64.64	1916.8	131.49	2184.66
(p-value)	(0.987)	(0.080)	(0.746)	(0.027)
Likelihood ratio test	51.63***		31.7***	

*p<.1 **p<.05 ***p<.001

4.4. Discussion

The present study focuses on determinants of infant mortality in the Philippines concerning two cross-sections; 2003 and 2008. As presented in the results, there are conspicuous differences in both years with regard to which factors are significant and the magnitude of their effects are in reference to the regression models.

Firstly, considering socioeconomic determinants primarily in a separate model has shown to have effects by themselves on infant mortality, particularly women's education and autonomy measures. Albeit in the goodness-of-fit test for Model 1 in 2008, it is observed that socioeconomic determinants have a lack of fit on predicting infant survival. By including the proximate determinants, the impact of the socioeconomic determinants is adjusted. This scenario of adjusting the effects had

been observed in other studies with altering variables (Matteson, Burr et al, 1998, Heaton, Forste et al, 2005). Heaton and his colleagues (2005) presented this in their study on 42 developing countries whereby they did a multi-level model which shows the foremost effect of women's education even after the addition of variables as breastfeeding practise and socioeconomic status.

Secondly, it had been assiduous to compare the results of the models based on the 2003 and 2008 data. There may have been societal developments that had affected the patterns of the characteristics of those who had borne infants in these periods.

This is a conclusion of Da Vanzo and Habicht (1986) when they analysed the Malaysian Family Life Surveys between the periods of 1946 to 1960 and 1960 to 1975. These are grouped as such due to the observed respective declines of infant mortality in those periods. What they had found is that the effect of mothers' education increased over the two periods while the other factors have dwarfed their effects as water source, sanitation condition, and breastfeeding. Their contention to this is that the post-war economic development has a particular conditioning effect over time.

These two general observations would be expounded in the following discussion by individual observations that have had impact on the analysis. Each of the observations may have developed in the Philippine context or even be compared with observations based on other societies.

4.4.1. Parental education and household wealth differences

In the previous decade of 1990's, education of the adult population aged 25 to 64 years in the Philippines show that at least a quarter have completed tertiary level and the youth aged 15 to 24 years are enrolled in said level (Virola 2006). The education level of the mothers is the sole determinant that is found significant in 2003 in Model 1 solely. This somehow show limited support of other research beginning from the work of Caldwell (1979) where he had analysed the effect of maternal education on child health in Nigeria. Even more recent studies show that indeed maternal education has an impact on health, particularly her children (Boyle 2006). The finding here that shows the exclusion of education as predictor in Model 2 for the 2003 data of maternal education supports the observation of Heaton et al. (2005) that the effect of education may be seen in health behaviour indicators as evidenced by proximate determinants. It may still be of use to note that the direction of association of maternal education remain positive for those in the tertiary level albeit not significant.

Paternal education is not found to be significant but indicates a positive association with survival. There is a lack of study on this in the context of the Philippines but, when compared with studies in other developing countries as what Breierova and Duflo (2004) analysed in Indonesia, they noted that maternal and paternal education has different ways of working toward fertility and mortality in the household.

Maternal education has more positive effects toward less children and later age at marriage than paternal education but, this difference is not observed in child mortality. What this suggests is that there may be matters within the society that has to be observed in depth to how these mechanisms of differences occur.

Another socioeconomic determinant that is compared with maternal education as to the degree of effect is socioeconomic status or the household wealth in the present case. As presented in the current study, socioeconomic status of the household is not found to be significant in relation to predicting survival of infants. This coincides with what Fuchs, Pamuk, and Lutz (2010) had observed when they compared education and wealth across all the available Demographic and Health Surveys in Asia, Latin America, and Africa. The results has shown that almost all countries exhibit the stronger relation of maternal education rather than wealth. Not only that they are larger in terms of effect, but the results for maternal education is also consistent and as to what is presented here, there is fluctuation and even counterintuitive results to increasing wealth.

4.4.2. Residence

Although place of residence is not found to be statistically significant, the regression result still suggest a positive effect toward survival of infants when living in urban areas in 2003 as seen in Table 4.3. But this is difficult to ascertain with regard to contextualisation as would be presented in Table 4.10.



Table 4.10: Select household facilities by location of residence, 2003 and 2008

2003					
	Rural	Sample size	Urban	Sample size	F
Source of drinking water					
Unimproved	10.98	201	4.33	83	
Developed	89.02	1628	95.67	1843	54.92***
Sanitation facility					
Unimproved	30.18	552	8.81	170	
Developed	69.82	1277	91.19	1757	266.53***
Total number of infants		1829		1926	
2008					
	Rural	Sample size	Urban	Sample size	F
Source of drinking water					
Unimproved	16.29	282	5.91	104	
Developed	83.71	1451	94.09	1661	87.16***
Sanitation facility					
Unimproved	26.65	462	9.94	176	
Developed	73.35	1271	90.06	1590	153.28***
Total number of infants		1733		1766	

Source: 2003 and 2008 NDHS data

Note: *** Significance level of 1 per cent **Significance level of 5 per cent
*Significance level of 10 per cent

The usual contention is the rural-urban gap with regard to the delivery of health care services. As Van de Poel, O'Donnell, and Van Doorslaer (2009) explores in their study in six African countries, the gap is borne more from household characteristics differences between rural and urban households particularly in water and sanitation facilities. Much less of the gap is explained by having a health facility within their respective vicinities. As presented in Table 4.10, the variation in household characteristics between types of residences are present in both years in the Philippines.

4.4.3. Sex inequities

On the general theme of views on sex inequity, sex preference at birth is important to note because it may affect infant mortality (Waldron 1998). Some countries exhibit preference of one over the other as in South Asian countries including Nepal and Bangladesh where Fuse (2010) observed the lowest preference to have female children compared across 50 countries. The Caribbean and Latin American countries demonstrate the opposite, as Haiti and Dominican Republic depict a matrifocal kinship system (Fuse 2010). But as what had been studied in the Philippines, this particular preference is not significant (Cruz and Vicerra 2013). Filipino families are more attuned to having one of each sex although having one sex among the children

is found to be satisfactory as well. This may be indicative of the observation that sex of infant and infant survivorship lack significant difference based on the bivariate analysis, therefore it was deemed unwarranted to include this factor to the logistic regression model.

Another form of inequity is women's status which can manifest itself in variety of effects on attitudes and health outcomes (Mason 2001). As David, Chin, and Herradura (1998) observed in Western Visayas, a region in the Philippines, women who are employed or are engaged in social activities reported more incidences of abuse. And also, Hindin's and Adair's (2002) study on autonomy and physical violence toward women presents that women in unions are more likely to experience violence when they make too few and too much decisions for the household; which may be in forms of economic or even movement to certain places in their community. It is observed that there are certain mechanisms to societies which affect the dynamics that can affect the personal health of women with regard to being subjected to violence in various forms.

By way of the present analysis, gaining responsibility in making decisions visiting health facilities and attaining positive attitude toward instances of IPV, directed to significant negative effects on child survival. The observation done by Fabros and colleagues (1998) in Philippine reproductive rights in the household level is similar to the current study whereby there are individual changes in status and even at the

community and national levels but, as a society, women remain in the vestibule of autonomy and the notion that the male is the head of the household persists and it affects family health. To exemplify, Ghuman's study (2003) involves a comparison of how autonomy measures may affect infant health, ultimately mortality, between particular Muslim and Non-Muslim communities in countries including Malaysia, Thailand, and the Philippines. Among the observations is in certain permutations of the models, there is a lowering of mortality when autonomy factors are introduced but there are also instances where mortality becomes higher.

Such variations in the results of studies indicates what Mason (1998) noted in her cross-national study of the economic decision-making of wives particularly in Islamic communities, which includes some in the Philippines, that domestic capacities are conditional. She observed that even within countries, having economic autonomy in one community may enhance or repress domestic power. And this observation may pave the approach at further looking into how autonomy of women could affect infant health and survival.

4.4.4. Maternal factors

Age of mother at the birth of her infant had been shown in the literature to improve their survival (Gyimah 2002, Kembo and van Ginneken 2009). It is the case in the Philippines even in past studies as Hobcraft's, McDonald's, and Rutstein's (1985) where even if the impact had not been particularly strong, they noted in their analysis that

having it in the extremes of teenage and older years, it produces stronger negative effect on both the health of the mother and her child. The East-West Center Program on Population (1993) compared three countries and again, although the effects of age at birth is rather weaker in the Philippines than in Thailand; it is noted to be pronounced in Indonesia.

In the present study, the regression analysis result for 2003 shows that as a mother gives birth at more advance ages, the likelihood of survival of the infant is lessened. What is noticeable is that in 2008, although not significant, the said outcome is reversed to having a positive association with survival. This could be related to what had been reported by the UNFPA (2013) that the adolescent pregnancy fertility rate in the Philippines is 53 births per a thousand women aged 15 to 19 years. This rate determines a large increase by 70 per cent in the period of 1999 to 2009 resulting to it being one of the highest among ASEAN countries. This may be a point warranted of future studies.

Parity and birth interval exhibit differing effects over time and between societies (Kembo and van Ginneken 2009). Birth interval in the current study does not show statistical significance but the odds ratios do present mixed results where the less risky birth interval of an 18-month interval has negative effects on survival rather than the risky interval of six months or less. This mixed results also show in studies of Hobcraft, McDonald, and Rutstein (1985) and Ballweg and Pagtolun-an (1992). Parity also affects

infant survival as presented in this study which continues the observation of Guilkey and Riphahn (1998).

Among these maternal factors, intention of bearing the infant bears a counterintuitive result where they have a substantial level of not surviving. Ulep and Borja (2012) studied in the Philippines in 2003 the intention of pregnancy for 6- to 36-month-old children at the time of survey if they received properly timed breastfeeding initiation and duration and it is presented that it being a planned pregnancy is favourable to apt breastfeeding regime. Past studies had been scarce on this matter on infant mortality but selected studies had passed upon the theme. In Lao PDR, mothers in the rural areas who want more children exhibit higher infant mortality in their families than rural mothers who do not have the intention to have more children (Kingkeo 1996). This shows that other factors may be confounding.

In the Philippines, Tan (1981) attributes the weak relations of pregnancy intention and survival of the infant or child may be based on changing attitudes over time between parents. This may be due to the question brought upon in the survey that the intention had been limited to the conception but, this may have actually turned into a 'wanted child.' Ballweg and Pagtolun-an (1992) observed the similar result and had ascribed other factors as nutrition, maternal care, and cultural or religious values may be more indicative of how this mechanism of intention of birth operates.

4.4.5. Health interventions

Health interventions on the mother and her infant are presented in the present study to have beneficial effect toward the survival of the child. These are primarily the three factors that have been observed to have perfect correlation where all the infants who live in households without any threat of infection, have been sufficiently breastfed for at least a period of a year, and those who have had their inoculation schedules completed have survived. Although the tetanus toxoid inoculation adherence of the mother does not bear such a perfect correlation and is not significant statistically based on the regression models for the period 2008, it is discernible to be positive toward the survival of the infant.

Another aspect among these health factors is the weight of the infant which is correlated to the nutrition of the mothers (Pedro, Cerdena et al, 2004). It is in Pedro's and her colleagues' (2004) analysis regarding the national survey on nutrition that a significant number of women remain deficient in vitamins and minerals that are essential to develop the baby while in the womb and further on for lactation. This observation was noted by the United Nations Children's Fund (2012) that it persists in the Philippines. The results from the present study observes the strong, statistically significant effect of infant weight at birth to predict the child's survival. These health factors are the ones that have been part of the foci of the Philippine government's Department of Health in order to adhere to the standards set by

international organisations. Such is that programmes for readily accessible inoculations for mother and infant are available as the *Expanded Program on Immunization*(DOH 2011), the *National Tuberculosis Control Program* (Department of Health and Philippine Coalition Against Tuberculosis 2003) that includes the education of the public on controlling infections in general, the *Accelerated Hunger Mitigation Program* (2008) for the nutrition component, and the developments on the breastfeeding act or RA 7600 (Congress of the Philippines 2010, COP, 1992).

These said policies are aimed at improving health of the society. And they have been empirically observed by studies as Adair's and Guilkey's (1997) where they studied the breastfeeding effect toward the morbidity of children in the province of Cebu in the Philippines. They have found that shorter duration of breastfeeding than what is recommended result to weakness in infants and children. Also, inoculations for both parent and child is helpful to become healthful (Singh, Pallikadavath et al, 2012); and this is supported further that such infections lead to the mortality of infants as indicated by the results of the study by Günther and Fink (2010) which includes the Philippines.

Although the factors mentioned here are shown to be complimentary toward the survival of infants, there are still a rather notable number of death when they are insufficient and as Black, Norms, and Bryce (2003) had indicated, these incidents may be concentrated on specific characteristics; mainly surrounding education and

socioeconomic status. And as seen in Tables 4.11, there is a pattern on who attains the beneficial standpoint. The characteristics included here are based on the previously used operationalization for the analyses. There are indications of extremes that those in the low socioeconomic status do not attain completion of infant immunisation and have a prevalence of infection in their household compared with those in the high socioeconomic status. But as it is in 2003, breastfeeding practise has a unique characteristics to it whereby those in the high SES have lower percentage of gaining sufficiency in their breastfeeding regime. This may be because their work status prevent them from performing this task. But in 2008, this again shifted to those in the low SES having the disadvantageous position.

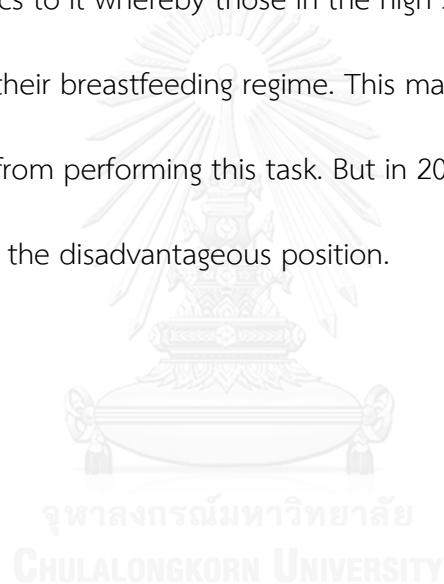


Table 4.1.1: Per cent distribution of infant that survived by select health indicators by maternal education and household socioeconomic status, 2003 and 2008

		2003									
		Breastfeeding duration		Presence of infection in the household		Completion of inoculation schedule		Approximate weight of infant at birth			
		Insufficient	Sample size	No presence of infection	Sample size	Incomplete	Sample size	Small	Sample size		
Maternal education											
No education		27.34	1004	45.40	1668	62.19	2285	26.27	965		
Primary		54.61	2006	48.81	1793	33.93	1247	25.91	952		
Secondary		67.16	2467	52.49	1929	23.01	845	14.79	543		
Higher		79.28	2913	60.47	2222	13.14	483	15.22	559		
F		58.23***		10.27***		55.39***		10.13***			
Socioeconomic status of the household											
Low		58.16	2137	47.80	1756	33.03	1213	21.66	796		
Middle		66.34	2437	56.38	2072	20.09	738	16.54	608		
High		80.08	2942	59.45	2184	13.84	508	14.72	541		
F		54.93***		16.54***		58.07***		5.87***			

2008

	Breastfeeding duration		Presence of infection in the household		Completion of inoculation schedule		Approximate weight of infant at birth	
	Insufficient	Sample size	No presence of infection	Sample size	Incomplete	Sample size	Small	Sample size
Maternal education								
No education	59.24	2030	60.21	2063	66.04	2263	28.94	992
Primary	45.36	1555	52.33	1793	26.37	904	23.96	821
Secondary	38.32	1313	55.40	1898	11.85	406	20.40	699
Higher	30.71	1052	60.66	2079	6.97	239	15.39	528
F	16.39***		4.39**		82.67***		4.38***	
Socioeconomic status of the household								
Low	43.83	1502	49.21	1687	22.94	786	23.03	789
Middle	36.76	1260	56.29	1929	10.96	375	19.10	655
High	31.29	1072	66.55	2281	6.95	238	16.36	561
F	15.99***		28.48***		54.87***		3.75**	

Source: 2003 and 2008 NDHS data

Note: *** Significance level of 1 per cent **Significance level of 5 per cent *Significance level of 10 per cent

4.4.6. Illness control behaviour

It is observed in studies on personnel attending to the health of mothers and infants bear a significant positive effect to their health. As Tan (2004) presented, it affects the avoidance of haemorrhage; and having proper health attendants also work toward avoidance of pre-eclampsia (Sibai, Dekker et al, 2005). Even behaviours post-delivery are affected as Hemat and colleagues (2009) presented that it has an effect on following immunisation protocols. These are the effects that the World Health Organization created guidelines on formulating a development of maternal healthcare delivery (2009). And at the same trajectory, the Philippine government aims to achieve an improved maternal mortality and infant mortality rates (2009).

On the present study, the birth attendant type at time of delivery indicates a deleterious effect to infant survival in 2008. This may be supported by other studies such as that of Claudio and her colleagues (2013) to which they studied one province in Northern Philippines that the people who had access to facilities and personnel increased their adherence to recommended prenatal initiation and frequency but, there is a discrepancy to those who have less access which happen to be from lower socioeconomic backgrounds. They remain to have insufficient prenatal and health delivery services. On the national level, this result is very similar (Lavado, Lagrada et al, 2010). They studied the quality of such prenatal service which is predictive on health attendant type at the time of birth. In their study, infants from

higher socioeconomic background receives higher quality of service as compared with those from lower SES and education attainment. But one note in the study is that prenatal adherence did improve from 2003 to 2008 but, the same mothers did not adhere to recommended birth attendant type.

It can be observed that based on the samples for 2003 and 2008 shown in Table 4.12, most women who have visited a doctor for prenatal services would eventually deliver in a medical facility but there are still those who will give birth in their homes. The differences are statistically significant ($F=210.2$, $p<0.001$ in 2003 and $F=187.0$, $p<0.001$ in 2008) that women who have undergone prenatal care from nurses and midwives would deliver in their homes in 2003 (73.4 per cent) and in 2008 (60.3 per cent). This may be related to the current findings and also to what Lavado et al. (2010) had observed regarding the reversal of having prenatal services from clinics and other facilities and subsequently delivering in places other than medical locations.

A factor that may affect ensuing the recommendation of giving birth at an accredited location with a medical personnel is the physical access of the people (Caballes 2010). It bears difficulty to deliver in a clinic at the least due to its being an emergency in nature rather than availing of prenatal services. Also a prospective reason why there is lower delivery with a medically-trained personnel is the perception of people that it would entail much financial resources (Becker, Peters et al, 1993).

This leads to the inkling that the programmes formulated fails to a certain degree clasp the target population of higher prevalence of infant mortality. Based on the observations here, maternal education is the most efficient in attaining improved survival of infants than wealth or other indications of higher socioeconomic background.



Table 4.12: Percentage distribution of antenatal care providers and place of delivery of infants' mothers, 2003 and 2008

Antenatal care provider		Place of delivery of infant							F
		Home	Sample size	Public facility	Sample size	Private facility	Sample size	Total	
2003									
Doctor		23.88	281	40.36	475	35.76	421	1176	
Nurse or Midwife		73.38	1556	19.49	413	7.13	151	2120	210.20***
Traditional birth attendant or other		89.04	409	8.31	38	2.64	12	459	
2008									
Antenatal care provider		Place of delivery of infant							F
		Home	Sample size	Public facility	Sample size	Private facility	Sample size	Total	
Doctor		20.75	208	35.05	352	44.20	444	1004	
Nurse or Midwife		60.32	1094	28.98	526	10.70	194	1814	187.03***
Traditional birth attendant or other		81.29	553	12.73	87	5.99	41	680	

Source: 2003 and 2008 NDHS data

Note: *** Significance level of 1 per cent **Significance level of 5 per cent *Significance level of 10 per cent

4.4.7. Summary

The discussion presented shows that there are similarities and differences in the factors that impact infant mortality in the Philippines, compared to the experience in other countries and contexts. Some, including mother's education, are observed to be similar to results among factors discerned in the literature regarding different societies and periods. There are also those that have been observed as distinctive for the society as the perceived negative effect of intentional births to survival of the infant as compared with unintended births. These varied thoughts pave the track for viewing the complex nature of population processes, particularly mortality studies.



Chapter 5

Conclusion and recommendation

5.1. Summary

This study on infant mortality in the Philippines has analysed the events of deaths among those less than a year old borne prior the years of 2003 and 2008.

Differentials are presented that are concerned with social, economic, and health-related factors regarding the sample infants based on the National Demographic and Health Surveys. Through these differentials, it is inferred that there are social gradients among the sample and their respective parents and households.

With respect to the bivariate analysis, selected factors are analysed to be not significant differently between categories and the experience of the event of infant deaths. These factors include sex of the infant and water source of the household among others. There are also those that are perfectly correlated and have been excluded toward creating the model for infant mortality. Breastfeeding duration, infant immunisation completion, and exposure to infection within the household persisted to be observed to have this level of correlation in both 2003 and 2008 samples. These are necessary to be raised because they have respective impacts toward the interpretation of what affects infant survival.

Among those included in the logistic regression analysis, there are factors as maternal education, sanitation facility in the household, and infant's weight at birth whose observed effects on infant deaths concur with past studies in the Philippines or even in other societies. Still, there are factors that are observed to be disinclined with trends in the literature as intention of pregnancy and selected women's autonomy dimensions. They produce counter-intuitive results but are supported by findings in limited occurrence.

This last note on producing seemingly counter-intuitive result on certain factors may also be due to the proportion of occurrences of mortality among the sample. Although the infant mortality in the country for both years of 2003 and 2008 are below other countries', it is still important to note that the MDG is yet to be achieved. Analysing this event of mortality, even with the said situation of relatively low number of incidences compared with the entire sample for this study, is necessary to guide as to which aspects in society are experiencing issues toward optimal infant health levels.

5.2. Conclusion

It is presented through the discussion that analysing with socioeconomic determinants and subsequently adding proximate determinants of health-related behaviour show a reduced effect of the former leading to a contention that infant mortality is better predicted when a multitude of factors are considered. It confirms the argument that individual characteristics have been regularly utilised but there are limitations to this method of analysis. Adapting the framework to be representative of Philippine experience also impacts the study that there are significant findings that are prospectively beneficial for programmatic resolution.

Another observation is the set of factors that exhibit influence toward infant survival change over time. Those that remain as maternal education, display strong effects as predictors which is the case for many studies even in societies other than the Philippines. This remark is on the current study relates to the changing Philippine society regarding individual behaviours which may have been influenced by changing also the policy and programme landscape.

It has been exemplified as well that there are gradients to certain behaviours as breastfeeding practise, exposure to infection, and completion of immunisation. Infants whose mothers have no education and are from a low socioeconomic status experience more infant deaths than those from the other extreme of the said

characteristics. These annotations may then be utilised toward creating policies that are better targeted to achieve the desired outcomes of improved population health.

5.3. Limitations and prospective studies on infant mortality

There are perceived limitations to this study and as such, subsequent research may follow to further develop the theme of infant mortality in the Philippines. Firstly, a measure explored here is the autonomy of women particularly decision-making capacity. As with households, decision-making involves the couple; both persons in the said relationship may have varying perceptions on who has an advantage when making such decisions. But for this study which utilises a survey involving solely the women aged 15 to 49 years, the perspective of the spouse or partner is absent. Although the 2003 NDHS contains a module with male respondents, the items in the respective questionnaires based on sexes are different. Also, this module is discontinued in the 2008 NDHS leading to incomparability.

Another point of development is the question on decisions regarding physical mobility and purchases, where every question lacks the aspect of frequency. The indication of how often the other measures are done is unmentioned; such as how often does a couple decide on making large purchases or going to a health facility. With this in perspective, the answers of the respondents are based on the notion of a general decision-making pattern that occurs.

It is also acknowledged that it is possible that there is underreporting of infant deaths by the respondents. What may augment this to a certain degree is that the sample considered for this study are most recent live births within the prescribed periods; whereby in the five years covered prior the enumeration of the surveys on the month of September on the years 2003 and 2008, the immediate preceding year is censored.

Part of the considerations for the adapted framework is the availability of data. The NDHS is a comprehensive data source and had been used extensively for official

country indicators but, there are still aspects that are left aside. One example of a determinant excluded is inflicted or experienced injury of the infant. Another theme that may be incorporated in future research on the topic is to gather and utilise data on biological markers. An example within the present study is the perceived birth weight of the infant by the mother. This limitation may be addressed to be the specific, accurate value of the weight. Such aspects are outside the scope of the data.

With all the perceived limitations of the study presented, this topic has its utility in terms of population research and also for policy formulation reference. The factors observed to be impactful toward infant survival may serve as guide to generating programmes that are integrative for the virtue of addressing individual issues while possessing a trajectory toward population health and well-being.



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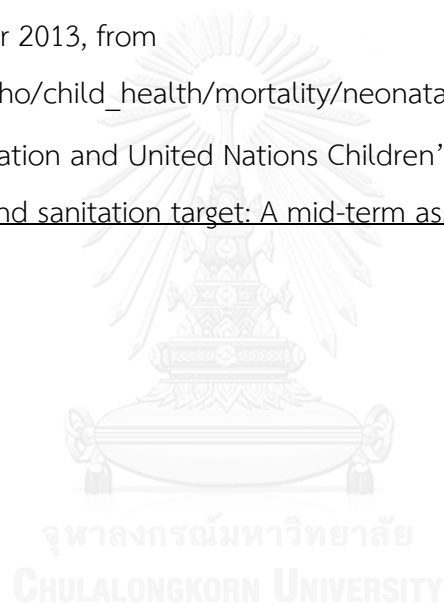
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Appendix 1 - Table A.1: Variance inflation factors and tolerances for variables in Model 1 of 2003

Variable (Category)	VIF	Tolerance
Sanitation facility (Improved)	4.14	0.24
Spouses' education level (Tertiary)	3.12	0.32
Mothers' education level (Tertiary)	3.08	0.32
Socioeconomic status (High)	3.01	0.33
Mothers' education level (Secondary)	2.62	0.38
Spouses' education level (Secondary)	2.44	0.41
Residence (Urban)	2.41	0.42
Socioeconomic status (Middle)	1.71	0.59
Mean VIF	2.82	

Appendix 2 - Table A.2: Variance inflation factors and tolerances of primary and corrected models according to variables for Model 2 of 2003

Primary model			Corrected model		
Variable (Category)	VIF	Tolerance	Variable (Category)	VIF	Tolerance
Birth attendant (Skilled)	10.9	0.09	Sanitation facility (Improved)	5.72	0.17
Sanitation facility (Improved)	5.93	0.17	Weight perception (Average)	3.56	0.28
Weight at birth (Average)	3.92	0.26	Mother's age at most recent birth (25 to 35 years)	3.39	0.29
Received tetanus toxoid inoculation	3.91	0.26	Mothers' education level (Tertiary)	3.27	0.31
Mother's age at most recent birth (25 to 35 years)	3.44	0.29	Received tetanus toxoid inoculation	3.24	0.31
Mothers' education level (Tertiary)	3.36	0.30	Spouse's education level (Tertiary)	3.2	0.31
Spouse's education level (Tertiary)	3.22	0.31	Socioeconomic status (High)	3.07	0.33
Socioeconomic status (High)	3.07	0.33	Mothers' education level (Secondary)	2.89	0.35
Mothers' education level (Secondary)	3	0.33	Spouse's education level (Secondary)	2.52	0.40
Spouse's education level (Secondary)	2.56	0.39	Mother's age at most recent birth (36 years and above)	2.48	0.40
Mother's age at most recent birth (36 years and above)	2.49	0.40	Residence (Urban)	2.43	0.41
Residence (Urban)	2.44	0.41	Pregnancy intention (Wanted)	2.02	0.49
Pregnancy intention (Wanted)	2.12	0.47	Number of children ever born (7 and above)	2.02	0.49

Continued Table A.2: Variance inflation factors and tolerances of primary and corrected models according to variables for Model 2 of 2003

Primary model			Corrected model		
Variable (Category)	VIF	Tolerance	Variable (Category)	VIF	Tolerance
Number of children ever born (7 and above)	2.09	0.48	Number of children ever born (3 to 4)	1.98	0.51
Number of children ever born (3 to 4)	2.02	0.49	Weight perception (Large)	1.87	0.53
Weight perception (Large)	2	0.50	Number of children ever born (5 to 6)	1.73	0.58
Number of children ever born (5 to 6)	1.79	0.56	Socioeconomic status (Middle)	1.71	0.58
Socioeconomic status (Middle)	1.72	0.58			
Mean VIF	3.33		Mean VIF	2.77	



Appendix 3 - Table A.3: Variables in Model 1 of 2008 and their respective variance inflation factors and tolerances

Variable (Category)	VIF	Tolerance
Sanitation facility (Improved)	5.13	0.19
Decision on going to health facility (Respondent is involved)	3.98	0.25
Mothers' education level (Tertiary)	3.38	0.30
Mothers' education level (Secondary)	3.31	0.30
Spouse's education level (Tertiary)	3.22	0.31
Spouse's education level (Secondary)	2.85	0.35
Socioeconomic status (High)	2.54	0.39
Socioeconomic status (Middle)	1.61	0.62
Attitude toward violence by partner (Does not justify wife-beating)	1.18	0.85
Mean VIF	3.02	

Appendix 4 - Table A.4: Variance inflation factors and tolerances for variables in Model 2 of 2008

Variable (Category)	VIF	Tolerance
Decision on going to health facility (Respondent is involved)	6.03	0.17
Sanitation facility (Improved)	5.91	0.17
Birth attendant (Skilled)	5.51	0.18
Received tetanus toxoid inoculation	5.06	0.20
Mothers' education level (Tertiary)	3.59	0.28
Mothers' education level (Secondary)	3.49	0.29
Mother's age at most recent birth (25 to 35 years)	3.35	0.30
Spouse's education level (Tertiary)	3.31	0.30
Weight perception (Average)	3.24	0.31
Spouse's education level (Secondary)	2.95	0.34
Socioeconomic status (High)	2.67	0.37

Mother's age at most recent birth (36 years and above)	2.30	0.44
Antenatal care adherence (Sufficient)	2.24	0.45
Weight perception (Large)	2.11	0.47



Continued Table A.4: Variance inflation factors and tolerances for variables in Model 2 of 2008

Variable (Category)	VIF	Tolerance
Number of children ever born (5 to 6)	2.01	0.50
Number of children ever born (7 and above)	1.83	0.55
Number of children ever born (3 to 4)	1.74	0.57
Socioeconomic status (Middle)	1.64	0.61
Attitude toward violence by partner (Does not justify wife-beating)	1.21	0.82
Mean VIF	3.17	

Appendix 5 – 2003 and 2008 National Demographic and Health Surveys Philippines
Questionnaires

<p>AUTHORITY: Commonwealth Act No. 591 authorizes this survey and the National Statistics Office to collect information on fertility, family planning and health.</p> <p>CONFIDENTIALITY: Sec. 4 of CA No. 591 provides that all information furnished on this form is held STRICTLY CONFIDENTIAL.</p>		<p>NATIONAL STATISTICS OFFICE</p> <p>2008 NATIONAL DEMOGRAPHIC AND HEALTH SURVEY</p> <p>INDIVIDUAL WOMAN'S QUESTIONNAIRE</p>		<p>NDHS FORM 2</p> <p>NSCB Approval No. NSO-0813-02 Expires July 31, 2009</p>																					
Booklet of <u> </u> Booklets																									
IDENTIFICATION																									
PROVINCE _____ CITY/MUNICIPALITY _____ BARANGAY _____ EA SAMPLE HOUSING UNIT SERIAL NUMBER HOUSEHOLD CONTROL NUMBER NDHS HOUSEHOLD NUMBER NAME OF HOUSEHOLD HEAD _____ NAME AND LINE NUMBER OF ELIGIBLE WOMAN _____ ADDRESS _____				<table border="1" style="width: 100%; height: 100%;"> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr> </table>																					
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	1	2	3	FINAL VISIT																					
DATE	_____	_____	_____	DAY	<table border="1" style="width: 20px; height: 20px;"><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>																				
INTERVIEWER'S NAME	_____	_____	_____	MONTH	<table border="1" style="width: 20px; height: 20px;"><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>																				
RESULT*	_____	_____	_____	YEAR	<table border="1" style="width: 20px; height: 20px;"><tr><td style="text-align: center;">2</td><td style="text-align: center;">0</td><td style="text-align: center;">0</td><td style="text-align: center;">8</td></tr></table>	2	0	0	8																
2	0	0	8																						
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				RESULT	<table border="1" style="width: 20px; height: 20px;"><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>																				
				TOTAL NUMBER OF VISITS	<table border="1" style="width: 20px; height: 20px;"><tr><td></td></tr></table>																				
<p>*RESULT CODES:</p> <table style="width: 100%;"> <tr> <td style="width: 50%;">1 COMPLETED</td> <td style="width: 50%;">5 PARTLY COMPLETED</td> </tr> <tr> <td>2 NOT AT HOME</td> <td>6 RESPONDENT INCAPACITATED</td> </tr> <tr> <td>3 POSTPONED</td> <td>7 OCW/OFW</td> </tr> <tr> <td>4 REFUSED</td> <td>8 OTHER _____</td> </tr> </table> <p style="text-align: right;">(SPECIFY)</p>						1 COMPLETED	5 PARTLY COMPLETED	2 NOT AT HOME	6 RESPONDENT INCAPACITATED	3 POSTPONED	7 OCW/OFW	4 REFUSED	8 OTHER _____												
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2 NOT AT HOME	6 RESPONDENT INCAPACITATED																								
3 POSTPONED	7 OCW/OFW																								
4 REFUSED	8 OTHER _____																								
LANGUAGE OF QUESTIONNAIRE** <table border="1" style="width: 20px; height: 20px;"><tr><td style="text-align: center;">7</td></tr></table>		7	LANGUAGE OF INTERVIEW** <table border="1" style="width: 20px; height: 20px;"><tr><td></td></tr></table>																						
7																									
LOCAL LANGUAGE OF RESPONDENT** <table border="1" style="width: 20px; height: 20px;"><tr><td></td></tr></table>			**LANGUAGE CODES																						
TRANSLATOR USED YES 1 NO 2		<table style="width: 100%;"> <tr> <td style="width: 20%;">1 TAGALOG</td> <td style="width: 20%;">5 HILIGAYNON</td> </tr> <tr> <td>2 CEBUANO</td> <td>6 WARAY</td> </tr> <tr> <td>3 ILOCANO</td> <td>7 ENGLISH</td> </tr> <tr> <td>4 BICOL</td> <td>8 OTHER _____</td> </tr> </table> <p style="text-align: right;">(SPECIFY)</p>				1 TAGALOG	5 HILIGAYNON	2 CEBUANO	6 WARAY	3 ILOCANO	7 ENGLISH	4 BICOL	8 OTHER _____												
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4 BICOL	8 OTHER _____																								
SUPERVISOR <table border="1" style="width: 20px; height: 20px;"><tr><td></td><td></td></tr></table> _____ Name and Signature Date			FIELD EDITOR <table border="1" style="width: 20px; height: 20px;"><tr><td></td><td></td></tr></table> _____ Name and Signature Date			OFFICE EDITOR <table border="1" style="width: 20px; height: 20px;"><tr><td></td><td></td></tr></table> _____ Name and Signature Date			ENCODER <table border="1" style="width: 20px; height: 20px;"><tr><td></td><td></td></tr></table> _____ Name and Signature Date																

AGE-BIRTH DATE CONSISTENCY CHART

Age	Has not had birthday in 2008	Has already had birthday in 2008	Age	Has not had birthday in 2008	Has already had birthday in 2008
	Don't Know			Don't Know	
0	2007	--	30	1977	1978
1	2006	2007	31	1976	1977
2	2005	2006	32	1975	1976
3	2004	2005	33	1974	1975
4	2003	2004	34	1973	1974
5	2002	2003	35	1972	1973
6	2001	2002	36	1971	1972
7	2000	2001	37	1970	1971
8	1999	2000	38	1969	1970
9	1998	1999	39	1968	1969
10	1997	1998	40	1967	1968
11	1996	1997	41	1966	1967
12	1995	1996	42	1965	1966
13	1994	1995	43	1964	1965
14	1993	1994	44	1963	1964
15	1992	1993	45	1962	1963
16	1991	1992	46	1961	1962
17	1990	1991	47	1960	1961
18	1989	1990	48	1959	1960
19	1988	1989	49	1958	1959
20	1987	1988	50	1957	1958
21	1986	1987	51	1956	1957
22	1985	1986	52	1955	1956
23	1984	1985	53	1954	1955
24	1983	1984	54	1953	1954
25	1982	1983	55	1952	1953
26	1981	1982	56	1951	1952
27	1980	1981	57	1950	1951
28	1979	1980	58	1949	1950
29	1978	1979	59	1948	1949

INTERVIEWER'S OBSERVATION

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

NAME OF SUPERVISOR: _____ DATE: _____

EDITOR'S OBSERVATIONS

NAME OF EDITOR: _____ DATE: _____

SECTION 1. RESPONDENT'S BACKGROUND

INTRODUCTION AND CONSENT			
<p>Hello. My name is _____ and I am working with the National Statistics Office. We are conducting a national survey about the health of women and children. We would very much appreciate your participation in this survey. I would like to ask you about your health (and the health of your children). This information will help the government to plan health services. Whatever information you provide will be kept strictly confidential and will not be shown to other persons.</p> <p>We hope that you will participate in this survey since your views are important. At this time, do you want to ask me anything about the survey? May I begin the interview now?</p> <p>SIGNATURE OF INTERVIEWER: _____ DATE: _____</p> <p>RESPONDENT AGREES TO BE INTERVIEWED 1 RESPONDENT DOES NOT AGREE TO BE INTERVIEWED 2 → END</p>			
NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME STARTED.	HOUR <input type="text"/> <input type="text"/> MINUTE <input type="text"/> <input type="text"/>	
102	First I would like to ask some questions about you. For most of the time until you were 12 years old, did you live in a city, in a town/poblacion, in the barrio or rural area, or abroad?	CITY 1 TOWN PROPER/POBLACION 2 BARRIO/RURAL AREA 3 ABROAD 4	
103	How long have you been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)? IF LESS THAN ONE YEAR, RECORD '00' YEARS.	YEARS <input type="text"/> <input type="text"/> SINCE BIRTH 95 VISITOR 96	→ 106
104	Just before you moved here, did you live in a city, in a town/poblacion, in the barrio or rural area, or abroad?	CITY 1 TOWN PROPER/POBLACION 2 BARRIO/RURAL AREA 3 ABROAD 4	
105	How long had you continuously lived in your previous place of residence? IF LESS THAN ONE YEAR, RECORD '00' YEARS.	YEARS <input type="text"/> <input type="text"/> SINCE BIRTH 95	
106	In what month and year were you born?	MONTH <input type="text"/> <input type="text"/> DONT KNOW MONTH 98 YEAR <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> DONT KNOW YEAR 9998	
107	How old were you at your last birthday? COMPARE AND CORRECT 106 AND/OR 107 IF INCONSISTENT.	AGE IN COMPLETED YEARS <input type="text"/> <input type="text"/>	
108	Have you ever attended school?	YES 1 NO 2	→ 111
109	What is the highest grade or year you completed?	_____ (SPECIFY) <input type="text"/> <input type="text"/>	

SECTION 2. REPRODUCTION

Now I would like to ask about all the pregnancies you have had during your life. By this I mean all the children born to you, whether they were born alive or dead, whether they are still living or not, whether they live with you or somewhere else, and pregnancies which you have had that did not result in a live birth. I understand that it is not easy to talk about all the children who have died or pregnancies that ended before full term, but it is important that you tell us about all of them, so that we can develop programs to improve children's health.											
NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP								
201	Have you ever given birth?	YES 1 NO 2	→ 206								
202	Do you have any sons or daughters whom you have given birth to who are now living with you?	YES 1 NO 2	→ 204								
203	How many sons live with you? And how many daughters live with you? IF NONE, RECORD '00'.	SONS AT HOME <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> DAUGHTERS AT HOME ... <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table>									
204	Do you have any sons or daughters whom you have given birth to who are alive but do not live with you?	YES 1 NO 2	→ 206								
205	How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	SONS ELSEWHERE <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> DAUGHTERS ELSEWHERE <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table>									
206	Have you ever given birth to a boy or girl who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but did not survive?	YES 1 NO 2	→ 208								
207	How many boys have died? And how many girls have died? IF NONE, RECORD '00'.	BOYS DEAD <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> GIRLS DEAD <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table>									
208	Women sometimes have pregnancies that do not result in a live born child. That is, a pregnancy can end early, in a miscarriage or the child can be born dead. Have you ever had a pregnancy that did not end in a live birth?	YES 1 NO 2	→ 210								
209	In all, how many pregnancies have you had that did not end in a live born child?	PREGNANCY LOSSES <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr></table>									
210	SUM ANSWERS TO 203, 205, 207 AND 209, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr></table>									
211	CHECK 210: Just to make sure that I have this right: you have had _____ children who are still living (CHECK 203 AND 205) _____ children who have died (CHECK 207) _____ pregnancies that did not result in a live birth (CHECK 209). You have had in TOTAL _____ pregnancies/births during your life. Is that correct? YES <input type="checkbox"/> NO <input type="checkbox"/> PROBE AND CORRECT 201-210 AS NECESSARY.										
212	CHECK 210: ONE OR MORE PREGNANCIES <input type="checkbox"/> NO PREGNANCIES <input type="checkbox"/>		→ 233								

213	Now I would like to record all your pregnancies, whether born alive, born dead, or lost before full term. Start with the first pregnancy you had. RECORD ALL THE PREGNANCIES. RECORD TWINS AND TRIPLETS ON SEPARATE LINES, IF LIVE BIRTHS.						
214	215	216	217	218	219	220	221
L I N E N U M B E R	Think back to the time of your (first/next) pregnancy. Was that a single or multiple pregnancy?	Was the baby born alive, born dead, or lost before full term?	Did that baby cry, move, or breathe when it was born?	What name was given to that child?	Is (NAME) a boy or a girl?	In what month and year was (NAME) born? PROBE: What is his/her birthday?	Is (NAME) still alive?
01	SINGLE ... 1 MULTIPLE . 2	BORN ALIVE 1 (SKIP TO 218)← BORN DEAD 2 LOST BEFORE FULL TERM 3 (SKIP TO 226)←	YES 1 NO 2 ↓ 226	_____ (NAME)	BOY 1 GIRL 2	MONTH <input type="text"/> <input type="text"/> YEAR <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	YES 1 NO 2 ↓ 225
02	SINGLE ... 1 MULTIPLE . 2	BORN ALIVE 1 (SKIP TO 218)← BORN DEAD 2 LOST BEFORE FULL TERM 3 (SKIP TO 226)←	YES 1 NO 2 ↓ 226	_____ (NAME)	BOY 1 GIRL 2	MONTH <input type="text"/> <input type="text"/> YEAR <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	YES 1 NO 2 ↓ 225
03	SINGLE ... 1 MULTIPLE . 2	BORN ALIVE 1 (SKIP TO 218)← BORN DEAD 2 LOST BEFORE FULL TERM 3 (SKIP TO 226)←	YES 1 NO 2 ↓ 226	_____ (NAME)	BOY 1 GIRL 2	MONTH <input type="text"/> <input type="text"/> YEAR <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	YES 1 NO 2 ↓ 225
04	SINGLE ... 1 MULTIPLE . 2	BORN ALIVE 1 (SKIP TO 218)← BORN DEAD 2 LOST BEFORE FULL TERM 3 (SKIP TO 226)←	YES 1 NO 2 ↓ 226	_____ (NAME)	BOY 1 GIRL 2	MONTH <input type="text"/> <input type="text"/> YEAR <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	YES 1 NO 2 ↓ 225
05	SINGLE ... 1 MULTIPLE . 2	BORN ALIVE 1 (SKIP TO 218)← BORN DEAD 2 LOST BEFORE FULL TERM 3 (SKIP TO 226)←	YES 1 NO 2 ↓ 226	_____ (NAME)	BOY 1 GIRL 2	MONTH <input type="text"/> <input type="text"/> YEAR <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	YES 1 NO 2 ↓ 225
06	SINGLE ... 1 MULTIPLE . 2	BORN ALIVE 1 (SKIP TO 218)← BORN DEAD 2 LOST BEFORE FULL TERM 3 (SKIP TO 226)←	YES 1 NO 2 ↓ 226	_____ (NAME)	BOY 1 GIRL 2	MONTH <input type="text"/> <input type="text"/> YEAR <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	YES 1 NO 2 ↓ 225
07	SINGLE ... 1 MULTIPLE . 2	BORN ALIVE 1 (SKIP TO 218)← BORN DEAD 2 LOST BEFORE FULL TERM 3 (SKIP TO 226)←	YES 1 NO 2 ↓ 226	_____ (NAME)	BOY 1 GIRL 2	MONTH <input type="text"/> <input type="text"/> YEAR <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	YES 1 NO 2 ↓ 225
08	SINGLE ... 1 MULTIPLE . 2	BORN ALIVE 1 (SKIP TO 218)← BORN DEAD 2 LOST BEFORE FULL TERM 3 (SKIP TO 226)←	YES 1 NO 2 ↓ 226	_____ (NAME)	BOY 1 GIRL 2	MONTH <input type="text"/> <input type="text"/> YEAR <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	YES 1 NO 2 ↓ 225

IF BORN ALIVE AND STILL LIVING			IF BORN ALIVE, BUT NOW DEAD	IF BORN DEAD OR LOST BEFORE BIRTH			
222	223	224	225	226	227	228	229
How old was (NAME) at his/her last birthday? RECORD AGE IN COMPLETED YEARS.	Is (NAME) living with you?	RECORD HOUSEHOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSEHOLD)	How old was (NAME) when he/she died? IF '1 YR', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN 2 YEARS; OR YEARS.	In what month and year did this pregnancy end?	How many months did the pregnancy last? RECORD IN COMPLETED MONTHS.	Did you or someone else do anything to end this pregnancy?	Were there any other pregnancies between the previous pregnancy and this pregnancy?
01 AGE IN YEARS <input type="text"/> <input type="text"/>	YES ... 1 NO ... 2	LINE NUMBER <input type="text"/> (SKIP TO NEXT PREGNANCY)	DAYS ... 1 <input type="text"/> <input type="text"/> MONTHS ... 2 <input type="text"/> <input type="text"/> YEARS ... 3 <input type="text"/> <input type="text"/> (SKIP TO NEXT PREGNANCY)	MONTH <input type="text"/> <input type="text"/> YEAR <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	MONTHS <input type="text"/> <input type="text"/>	YES ... 1 NO ... 2	
02 AGE IN YEARS <input type="text"/> <input type="text"/>	YES ... 1 NO ... 2	LINE NUMBER <input type="text"/> (SKIP TO 229)	DAYS ... 1 <input type="text"/> <input type="text"/> MONTHS ... 2 <input type="text"/> <input type="text"/> YEARS ... 3 <input type="text"/> <input type="text"/> (SKIP TO 229)	MONTH <input type="text"/> <input type="text"/> YEAR <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	MONTHS <input type="text"/> <input type="text"/>	YES ... 1 NO ... 2	YES ... 1 NO ... 2
03 AGE IN YEARS <input type="text"/> <input type="text"/>	YES ... 1 NO ... 2	LINE NUMBER <input type="text"/> (SKIP TO 229)	DAYS ... 1 <input type="text"/> <input type="text"/> MONTHS ... 2 <input type="text"/> <input type="text"/> YEARS ... 3 <input type="text"/> <input type="text"/> (SKIP TO 229)	MONTH <input type="text"/> <input type="text"/> YEAR <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	MONTHS <input type="text"/> <input type="text"/>	YES ... 1 NO ... 2	YES ... 1 NO ... 2
04 AGE IN YEARS <input type="text"/> <input type="text"/>	YES ... 1 NO ... 2	LINE NUMBER <input type="text"/> (SKIP TO 229)	DAYS ... 1 <input type="text"/> <input type="text"/> MONTHS ... 2 <input type="text"/> <input type="text"/> YEARS ... 3 <input type="text"/> <input type="text"/> (SKIP TO 229)	MONTH <input type="text"/> <input type="text"/> YEAR <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	MONTHS <input type="text"/> <input type="text"/>	YES ... 1 NO ... 2	YES ... 1 NO ... 2
05 AGE IN YEARS <input type="text"/> <input type="text"/>	YES ... 1 NO ... 2	LINE NUMBER <input type="text"/> (SKIP TO 229)	DAYS ... 1 <input type="text"/> <input type="text"/> MONTHS ... 2 <input type="text"/> <input type="text"/> YEARS ... 3 <input type="text"/> <input type="text"/> (SKIP TO 229)	MONTH <input type="text"/> <input type="text"/> YEAR <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	MONTHS <input type="text"/> <input type="text"/>	YES ... 1 NO ... 2	YES ... 1 NO ... 2
06 AGE IN YEARS <input type="text"/> <input type="text"/>	YES ... 1 NO ... 2	LINE NUMBER <input type="text"/> (SKIP TO 229)	DAYS ... 1 <input type="text"/> <input type="text"/> MONTHS ... 2 <input type="text"/> <input type="text"/> YEARS ... 3 <input type="text"/> <input type="text"/> (SKIP TO 229)	MONTH <input type="text"/> <input type="text"/> YEAR <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	MONTHS <input type="text"/> <input type="text"/>	YES ... 1 NO ... 2	YES ... 1 NO ... 2
07 AGE IN YEARS <input type="text"/> <input type="text"/>	YES ... 1 NO ... 2	LINE NUMBER <input type="text"/> (SKIP TO 229)	DAYS ... 1 <input type="text"/> <input type="text"/> MONTHS ... 2 <input type="text"/> <input type="text"/> YEARS ... 3 <input type="text"/> <input type="text"/> (SKIP TO 229)	MONTH <input type="text"/> <input type="text"/> YEAR <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	MONTHS <input type="text"/> <input type="text"/>	YES ... 1 NO ... 2	YES ... 1 NO ... 2
08 AGE IN YEARS <input type="text"/> <input type="text"/>	YES ... 1 NO ... 2	LINE NUMBER <input type="text"/> (SKIP TO 229)	DAYS ... 1 <input type="text"/> <input type="text"/> MONTHS ... 2 <input type="text"/> <input type="text"/> YEARS ... 3 <input type="text"/> <input type="text"/> (SKIP TO 229)	MONTH <input type="text"/> <input type="text"/> YEAR <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	MONTHS <input type="text"/> <input type="text"/>	YES ... 1 NO ... 2	YES ... 1 NO ... 2

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
230	Have you had any pregnancy since the last pregnancy mentioned? EXCLUDE CURRENT PREGNANCY	YES 1 NO 2	→ 215
231	COMPARE 210 WITH NUMBER OF PREGNANCIES IN HISTORY AND PUT X MARK: NUMBERS ARE SAME <input type="checkbox"/> NUMBERS ARE DIFFERENT <input type="checkbox"/> (PROBE AND RECONCILE) CHECK: FOR EACH PREGNANCY: YEAR IS RECORDED IN 220 OR 226. FOR EACH LIVING CHILD: CURRENT AGE IS RECORDED IN 222. FOR EACH DEAD CHILD: AGE AT DEATH IS RECORDED IN 225. FOR AGE AT DEATH 12 MONTHS OR 1 YR: PROBE FOR EXACT NO. OF MONTHS.		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
232	CHECK 220 AND ENTER THE NUMBER OF LIVE BIRTHS SINCE JANUARY 2003. IF NONE, RECORD '0'		<input type="checkbox"/>
233	Are you pregnant now?	YES 1 NO 2 UNSURE 8	→ 238
234	How many months pregnant are you?	MONTHS <input type="text"/>	
235	At the time you became pregnant did you want to become pregnant <u>then</u> , did you want to wait until <u>later</u> , or did you <u>not want</u> to become pregnant at all?	WANTED THEN 1 WANTED TO WAIT LATER 2 DID NOT WANT AT ALL 3	
236	When did your last menstrual period start? _____ (DATE, IF GIVEN) IF SAME DAY, RECORD "00"	DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3 YEARS AGO 4 IN MENOPAUSE/ HAS HAD HYSTERECTOMY 004 BEFORE LAST BIRTH 005 NEVER MENSTRUATED 006	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> → 238
237	How old were you when you had your first menstrual period?	AGE <input type="text"/>	
238	From one menstrual period to the next, is there a time when a woman is more likely to become pregnant if she has sexual relations? IF NO, PROBE: Do you know if there is a time when it is not safe for a woman to have sex because she can get pregnant?	YES 1 NO 2 DONT KNOW 8	→ 301
239	Is this time just before her period begins, during her period, right after her period has ended, or half way between two periods?	JUST BEFORE HER PERIOD BEGINS 1 DURING HER PERIOD 2 RIGHT AFTER HER PERIOD HAS ENDED 3 HALFWAY BETWEEN TWO PERIODS 4 OTHER 6 (SPECIFY) DONT KNOW 8	

SECTION 3. CONTRACEPTION

Now I would like to talk about family planning - the various ways or methods that a couple can use to delay or avoid a pregnancy. ENCIRCLE CODE 1 IN 301 FOR EACH METHOD MENTIONED SPONTANEOUSLY. THEN PROCEED DOWN COLUMN 301, READING THE NAME AND DESCRIPTION OF EACH METHOD NOT MENTIONED SPONTANEOUSLY. ENCIRCLE CODE 1 IF METHOD IS RECOGNIZED, AND CODE 2 IF NOT RECOGNIZED. THEN, FOR EACH METHOD WITH CODE 1 ENCIRCLED IN 301, ASK 302.			
301	Which ways or methods have you heard about? FOR METHODS NOT MENTIONED SPONTANEOUSLY, ASK: Have you ever heard of (METHOD)?		302 Have you ever used (METHOD)?
01	LIGATION/FEMALE STERILIZATION. Woman can have an operation to avoid having any more children.	YES 1 NO 2 ↓	Have you ever had an operation to avoid having any more children? YES 1 NO 2
02	VASECTOMY/MALE STERILIZATION. Men can have an operation to avoid having any more children.	YES 1 NO 2 ↓	Have you ever had a partner who had an operation to avoid having any more children? YES 1 NO 2 DONT KNOW 8
03	PILL. Women can take a pill everyday to avoid becoming pregnant.	YES 1 NO 2 ↓	YES 1 NO 2
04	IUD. Women who have a loop or coil placed inside them by a doctor or a nurse.	YES 1 NO 2 ↓	YES 1 NO 2
05	INJECTABLES. Women can have an injection by a health provider that stops them from becoming pregnant for one or more months.	YES 1 NO 2 ↓	YES 1 NO 2
06	IMPLANTS. Women can have several small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for one or more years.	YES 1 NO 2 ↓	YES 1 NO 2
07	PATCH. Women can put a hormonal patch on their upper outer arm, buttocks, abdomen or thigh to avoid getting pregnant.	YES 1 NO 2 ↓	YES 1 NO 2
08	CONDOM. Men can put a rubber sheath on their penis during sexual intercourse.	YES 1 NO 2 ↓	Have you ever had a partner who used condom? YES 1 NO 2
09	FEMALE CONDOM. Women can place a sheath in their vagina before sexual intercourse.	YES 1 NO 2 ↓	YES 1 NO 2
10	MUCUS, BILLINGS, OVULATION. Women can monitor the cervical mucus to determine the days of the month they are most likely to get pregnant.	YES 1 NO 2 ↓	YES 1 NO 2
11	BASAL BODY TEMPERATURE. Women can monitor the body temperature to determine the days of the month they are most likely to get pregnant.	YES 1 NO 2 ↓	YES 1 NO 2
12	SYMPTOTHERMAL. It is a combination of Basal Body Temperature and Mucus, Billings, Ovulation Method.	YES 1 NO 2 ↓	YES 1 NO 2

301	Which ways or methods have you heard about? FOR METHODS NOT MENTIONED SPONTANEOUSLY, ASK: Have you ever heard of (METHOD)?	302 Have you ever used (METHOD)?	
13	STANDARD DAYS METHOD. This method uses a beaded necklace on which each bead represents the days of a woman's cycle. The necklace would help determine the days when the woman is likely to get pregnant.	YES 1 NO 2 ↓	YES 1 NO 2
14	LACTATIONAL AMENORRHEA METHOD (LAM).	YES 1 NO 2 ↓	YES 1 NO 2
15	CALENDAR OR RHYTHM OR PERIODIC ABSTINENCE. Every month that a woman is sexually active she can avoid pregnancy by not having sexual intercourse on the days of the month she is most likely to get pregnant.	YES 1 NO 2 ↓	YES 1 NO 2
16	WITHDRAWAL. Men can be careful and pull out before climax.	YES 1 NO 2 ↓	Have you ever had a partner who used withdrawal? YES 1 NO 2
17	EMERGENCY CONTRACEPTION. Women can take pills up to three days after sexual intercourse to avoid becoming pregnant.	YES 1 NO 2 ↓	YES 1 NO 2
18	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	YES 1 (SPECIFY) _____ (SPECIFY) _____ NO 2	YES 1 NO 2 YES 1 NO 2
NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
303	CHECK 302: NOT A SINGLE <input type="checkbox"/> AT LEAST ONE <input type="checkbox"/> "YES" (NEVER USED) (EVER USED)		→ 306
304	Have you ever used anything or tried in any way to delay or avoid getting pregnant?	YES 1 NO 2	→ 341
305	What have you used or done? CORRECT 302 AND 303 (AND 301 IF NECESSARY).		
306	Now I would like to ask you about the first time that you did something or used a method to avoid getting pregnant. How many living children did you have at that time, if any? IF NONE, RECORD '00'.	NUMBER OF CHILDREN <input type="text"/> <input type="text"/>	8A
307	CHECK 302(01): LIGATION/FEMALE STERILIZATION WOMAN NOT STERILIZED <input type="checkbox"/> WOMAN STERILIZED <input type="checkbox"/> 302(01)=2 302(01)=1		→ 310A
308	CHECK 233: NOT PREGNANT OR UNSURE <input type="checkbox"/> PREGNANT <input type="checkbox"/>		→ 331
309	Are you currently doing something or using any method to delay or avoid getting pregnant?	YES 1 NO 2	→ 331

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
316	<p>CHECK 310/310A:</p> <p>CODE 'A' <input type="checkbox"/> CIRCLED CODE 'B' <input type="checkbox"/> CIRCLED</p> <p>Before your sterilization operation, were you told that you would not be able to have any (more) children because of the operation? Before the sterilization operation, was your husband/partner told that he would not be able to have any (more) children because of the operation?</p>	<p>YES 1</p> <p>NO 2</p> <p>DON'T KNOW 8</p>	
317	<p>How much did you (your husband/partner) pay in total for the sterilization, including any consultation you (he) may have had?</p> <p>IF COST OF STERILIZATION WAS INCLUDED IN COST OF NORMAL DELIVERY, SEPARATE OR ESTIMATE COST.</p>	<p>COST IN PESOS <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>FREE 00000</p> <p>DONE WITH CAESARIAN SECTION 99998</p> <p>DON'T KNOW 99998</p>	
318	<p>In what month and year was the sterilization performed (ligated/vasectomized)?</p>		
318A	<p>Since what month and year have you been using (CURRENT METHOD) without stopping?</p> <p>PROBE: For how long have you been using (CURRENT METHOD) now without stopping?</p> <p>THEN ESTIMATE THE MONTH AND YEAR BASED ON THE LENGTH OF CONTINUOUS USE</p>	<p>MONTH <input type="text"/> <input type="text"/></p> <p>YEAR <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p>	
319	<p>CHECK 318/318A, 220 AND 226:</p> <p>ANY BIRTH OR PREGNANCY TERMINATION AFTER MONTH AND YEAR OF START OF USE OF CONTRACEPTION IN 318/318A YES <input type="checkbox"/> NO <input type="checkbox"/></p> <p>GO BACK TO 318/318A, PROBE AND RECORD MONTH AND YEAR AT START OF CONTINUOUS USE OF CURRENT METHOD (MUST BE AFTER LAST BIRTH OR PREGNANCY TERMINATION).</p>		
320	<p>CHECK 310/310A:</p> <p>CIRCLE METHOD CODE:</p> <p>IF MORE THAN ONE METHOD CODE CIRCLED IN 310/310A, CIRCLE CODE FOR HIGHEST METHOD IN LIST.</p>	<p>FEMALE STERILIZATION 01</p> <p>MALE STERILIZATION 02</p> <p>PILL 03</p> <p>IUD 04</p> <p>INJECTABLE 05</p> <p>IMPLANTS 06</p> <p>PATCH 07</p> <p>CONDOM 08</p> <p>FEMALE CONDOM 09</p> <p>DIAPHRAGM 10</p> <p>FOAM/JELLY/CREAM 11</p> <p>MUCUS, BILLINGS, OVULATION 12</p> <p>BASAL BODY TEMPERATURE 13</p> <p>SYMPTOTHERMAL 14</p> <p>STANDARD DAYS METHOD 15</p> <p>LAM 16</p> <p>CALENDAR/RHYTHM/PERIODIC ABSTINENCE 17</p> <p>WITHDRAWAL 18</p> <p>OTHER METHOD 98</p>	<p>→ 323</p> <p>→ 330</p> <p>→ 321</p> <p>→ 321A</p> <p>→ 330</p>

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
321	CHECK 320 (03-11) Where did you obtain (CURRENT METHOD FROM 320) when you started using it?	PUBLIC SECTOR GOVT. HOSPITAL 11 RURAL HEALTH UNIT (RHU)/ URBAN HEALTH CENTER . . 12 BARANGAY HEALTH STATION . 13 BARANGAY SUPPLY/SERVICE POINT OFFICER/BHW 14 OTHER PUBLIC 15 (SPECIFY)	
321A	CHECK 320 (12-17) Where did you learn how to use the (CURRENT METHOD FROM 320)? IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PRIVATE SECTOR PRIVATE HOSPITAL OR CLINIC 21 PHARMACY 22 PRIVATE DOCTOR 23 PRIVATE NURSE/MIDWIFE . . . 24 NGO 25 INDUSTRY-BASED CLINIC . . . 26 OTHER PRIVATE 27 (SPECIFY) OTHERS PUERICULTURE CENTER . . . 31 STORE 32 CHURCH 33 FRIENDS/RELATIVES 34 OTHER 36 (SPECIFY)	
322	CHECK 310/310A: CIRCLE METHOD CODE: IF MORE THAN ONE METHOD CODE CIRCLED IN 310/310A, CIRCLE CODE FOR HIGHEST METHOD IN LIST.	PILL 03 IUD 04 INJECTABLE 05 IMPLANTS 06 PATCH 07 CONDOM 08 FEMALE CONDOM 09 DIAPHRAGM 10 FOAM/JELLY/CREAM 11 MUCUS/BILLINGS/OVULATION . . 12 BASAL BODY TEMPERATURE . . . 13 SYMPTOTHERMAL 14 STANDARD DAYS METHOD 15 LAM 16 CALENDAR/RHYTHM/ PERIODIC ABSTINENCE 17	→ 329 → 328
323	You obtained (CURRENT METHOD FROM 320/322) from (SOURCE OF METHOD FROM 315 OR 321/321A) in (DATE FROM 318/318A). At that time, were you told about side effects or problems you might have with the method?	YES 1 NO 2	→ 325
324	Were you ever told by a health or family planning worker about side effects or problems you might have with the method?	YES 1 NO 2	→ 326

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
330	CHECK 318/318A: (STARTED USING CURRENT METHOD CONTINUOUSLY) AFTER (AUGUST/SEPTEMBER) 2007 <input type="checkbox"/> BEFORE OR IN (AUGUST/SEPTEMBER) 2007 <input type="checkbox"/>		→ 343
331	Now, I would like to ask you some questions about your family planning practice one year ago. In (CURRENT MONTH) in 2007, were you/was your partner doing something or using any method to delay or avoid getting pregnant? IF PREGNANT IN CURRENT MONTH IN 2007, CIRCLE '2'.	YES 1 NO 2	→ 335
332	Which method were you using in (CURRENT MONTH) 2007? IF MORE THAN ONE METHOD MENTIONED, CIRCLE METHOD HIGHEST IN LIST.	PILL 03 IUD 04 INJECTABLE 05 IMPLANTS 06 PATCH 07 CONDOM 08 FEMALE CONDOM 09 DIAPHRAGM 10 FOAM/JELLY/CREAM 11 MUCUS/BILLINGS/OVULATION 12 BASAL BODY TEMPERATURE 13 SYMPTOTHERMAL 14 STANDARD DAYS METHOD 15 LAM 16 CALENDAR/RHYTHM/ PERIODIC ABSTINENCE 17 WITHDRAWAL 18 OTHER 96 (SPECIFY)	
333	COMPARE 310 AND 332: (IF MORE THAN ONE METHOD IN 310, CHOOSE METHOD HIGHEST IN THE LIST.) DIFFERENT METHODS IN 310 & 332 <input type="checkbox"/> METHOD IN 310 NOT ASKED <input type="checkbox"/> SAME METHOD IN 310 & 332 <input type="checkbox"/>		→ 335
334	Why did you stop using (METHOD IN 332)?	INFREQUENT SEX/HUSBAND AWAY/OLD 01 BECAME PREGNANT WHILE USING 02 WANTED TO BECOME PREGNANT 03 HUSBAND/PARTNER DISAPPROVED 04 WANTED MORE EFFECTIVE METHOD 05 HEALTH CONCERNS 06 SIDE EFFECTS 07 INACCESSIBLE/UNAVAILABLE 08 COSTS TOO MUCH 09 INCONVENIENT TO USE 10 FATALISTIC 11 DIFFICULT TO GET PREGNANT/ MENOPAUSE/ HYSTERECTOMY 12 MARITAL DISSOLUTION/ SEPARATION 13 OTHER 96 (SPECIFY) DONT KNOW 98	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
335	CHECK 233 PREGNANT <input type="checkbox"/> NOT PREGNANT OR UNSURE <input type="checkbox"/>		→ 339
336	Immediately prior to this pregnancy, were you using any method to delay or avoid getting pregnant?	YES 1 NO 2	→ 339
337	What method did you use? IF MORE THAN ONE METHOD MENTIONED, CIRCLE METHOD HIGHEST IN LIST.	PILL 03 IUD 04 INJECTABLE 05 IMPLANTS 06 PATCH 07 CONDOM 08 FEMALE CONDOM 09 DIAPHRAGM 10 FOAM/JELLY/CREAM 11 MUCUS/BILLINGS/OVULATION 12 BASAL BODY TEMPERATURE 13 SYMPTOTHERMAL 14 STANDARD DAYS METHOD 15 LAM 16 CALENDAR/RHYTHM/ PERIODIC ABSTINENCE 17 WITHDRAWAL 18 OTHER (SPECIFY) 96	
338	Did you become pregnant while using (METHOD IN 337) or did you stop to get pregnant, or did you stop for some other reason?	BECAME PREGNANT WHILE USING 1 WANTED TO BECOME PREGNANT 2 STOP FOR OTHER REASON 3	
339	Did you use any (other) method(s) between (CURRENT MONTH) in 2007 and (CURRENT MONTH) in 2008?	YES 1 NO 2	→ 343
340	What are these methods? CIRCLE ALL MENTIONED	PILL C IUD D INJECTABLE E IMPLANTS F PATCH G CONDOM H FEMALE CONDOM I DIAPHRAGM J FOAM/JELLY/CREAM K MUCUS/BILLINGS/OVULATION L BASAL BODY TEMPERATURE M SYMPTOTHERMAL N STANDARD DAYS METHOD O LAM P CALENDAR/RHYTHM/ PERIODIC ABSTINENCE Q WITHDRAWAL R OTHER (SPECIFY) X	→ 343
341	Do you know of a place where you can obtain a method of family planning?	YES 1 NO 2	→ 343

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
342	<p>Where is that?</p> <p>Any other place?</p> <p>PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE.</p> <p>IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER OR CLINIC IS PUBLIC OR PRIVATE, WRITE THE NAME OF THE PLACE.</p> <p>_____</p> <p>(NAME OF PLACE)</p>	<p>PUBLIC SECTOR</p> <p>GOVT. HOSPITAL..... A</p> <p>RURAL HEALTH UNIT (RHU)/ URBAN HEALTH CENTER . B</p> <p>BARANGAY HEALTH STATION. C</p> <p>BARANGAY SUPPLY/SERVICE POINT OFFICER/BHW D</p> <p>OTHER PUBLIC _____ E (SPECIFY)</p> <p>PRIVATE SECTOR</p> <p>PRIVATE HOSPITAL OR CLINIC F</p> <p>PHARMACY G</p> <p>PRIVATE DOCTOR H</p> <p>PRIVATE NURSE/MIDWIFE ... I</p> <p>NGO J</p> <p>INDUSTRY-BASED CLINIC ... K</p> <p>OTHER PRIVATE _____ L (SPECIFY)</p> <p>OTHERS</p> <p>PUERICULTURE CENTER ... M</p> <p>STORE N</p> <p>CHURCH O</p> <p>FRIENDS/RELATIVES P</p> <p>OTHER _____ X (SPECIFY)</p>	
343	In the last 12 months, were you visited by a healthworker who talked to you about family planning?	<p>YES 1</p> <p>NO 2</p>	
344	In the last 12 months, have you visited a health facility for care for yourself (or your children) or any purpose?	<p>YES 1</p> <p>NO 2</p>	→ 401
345	Did any staff member at the health facility speak to you about family planning methods?	<p>YES 1</p> <p>NO 2</p>	



SECTION 4. PREGNANCY, POSTNATAL CARE AND BREASTFEEDING

401	CHECK 232: ONE OR MORE BIRTHS IN 2003 OR LATER <input type="checkbox"/> NO BIRTHS IN 2003 OR LATER <input type="checkbox"/> → 554			
402	CHECK 220: ENTER IN THE TABLE THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 2003 OR LATER. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 3 BIRTHS, USE LAST 2 COLUMNS OF ADDITIONAL QUESTIONNAIRES). Now I would like to ask you some questions about the health of all your children born in the last five years. (We will talk about each separately.)			
403	LINE NUMBER FROM 214	LAST BIRTH LINE NO. <input type="text"/> <input type="text"/>	NEXT-TO-LAST BIRTH LINE NO. <input type="text"/> <input type="text"/>	SECOND-FROM-LAST BIRTH LINE NO. <input type="text"/> <input type="text"/>
404	FROM 218 AND 221	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>
405	At the time you became pregnant with (NAME), did you want to become pregnant <u>then</u> , did you want to wait until <u>later</u> , or did you <u>not</u> want to have any (more) children at all?	THEN 1 (SKIP TO 408) ← LATER 2 NOT AT ALL 3 (SKIP TO 407) ←	THEN 1 (SKIP TO 432) ← LATER 2 NOT AT ALL 3 (SKIP TO 432) ←	THEN 1 (SKIP TO 432) ← LATER 2 NOT AT ALL 3 (SKIP TO 432) ←
406	How much longer would you like to have waited before you got pregnant with (NAME)? IF IN MONTHS, RECORD IN MONTHS. IF TWO YEARS, PROBE FOR EXACT NO. OF MONTHS. IF WITH FRACTION OF YEAR, CONVERT TO MONTHS AND RECORD IN MONTHS.	MONTHS ... 1 <input type="text"/> <input type="text"/> YEARS ... 2 <input type="text"/> <input type="text"/> DONT KNOW 998	MONTHS ... 1 <input type="text"/> <input type="text"/> YEARS ... 2 <input type="text"/> <input type="text"/> DONT KNOW 998 (SKIP TO 432) ←	MONTHS ... 1 <input type="text"/> <input type="text"/> YEARS ... 2 <input type="text"/> <input type="text"/> DONT KNOW 998 (SKIP TO 432) ←
407	Immediately before you became pregnant with (NAME), were you using any method to delay or avoid getting pregnant?	YES 1 NO 2		
408	Did you see anyone for prenatal care for this pregnancy? IF YES: Whom did you see? Anyone else? PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS SEEN.	HEALTH PROFESSIONAL DOCTOR A NURSE B MIDWIFE C HILOT D OTHER X (SPECIFY) NO ONE Y (SKIP TO 417) ←		

NO.	QUESTIONS AND FILTERS	LAST BIRTH	NEXT-TO-LAST BIRTH	SECOND-FROM-LAST BIRTH
		NAME _____	NAME _____	NAME _____
409	<p>Where did you receive prenatal care for this pregnancy?</p> <p>Anywhere else?</p> <p>Anyone else?</p> <p>PROBE TO IDENTIFY TYPE(S) OF SOURCE(S) AND CIRCLE THE APPROPRIATE CODE(S).</p> <p>IF UNABLE TO DETERMINE IF A HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE, WRITE THE NAME OF THE PLACE.</p> <p>_____</p> <p>_____</p> <p>(NAME OF PLACE(S))</p>	<p>HOME</p> <p>YOUR HOME A</p> <p>OTHER HOME B</p> <p>PUBLIC SECTOR</p> <p>GOVT. HOSPITAL C</p> <p>RURAL/URBAN HEALTH CENTER D</p> <p>BARANGAY HEALTH STATION E</p> <p>BARANGAY SUPPLY/ SERVICE POINT OFFICER/BHW ... F</p> <p>OTHER PUBLIC G</p> <p>(SPECIFY)</p> <p>PRIVATE SECTOR</p> <p>PVT. HOSPITAL/ CLINIC H</p> <p>PRIVATE DOCTOR ... I</p> <p>PRIVATE NURSE/ MIDWIFE J</p> <p>NGO K</p> <p>INDUSTRY-BASED CLINIC L</p> <p>OTHER PRIVATE M</p> <p>(SPECIFY)</p> <p>OTHER _____ X</p> <p>(SPECIFY)</p>		
410	How many months pregnant were you when you first received prenatal care for this pregnancy?	MONTHS <input type="text"/> <input type="text"/>		
		DONT KNOW 98		
411	How many times did you receive prenatal care for this pregnancy?	NO OF TIMES ... <input type="text"/> <input type="text"/>		
		DONT KNOW 98		
412	CHECK 411:	<p>ONCE <input type="checkbox"/> MORE THAN ONCE <input type="checkbox"/></p> <p>(SKIP TO 414) OR DK ↓</p>		
413	How many months pregnant were you the last time you received prenatal care?	MONTHS <input type="text"/> <input type="text"/>		
		DONT KNOW 98		
414	As part of your prenatal care during this pregnancy, were any of the following done at least once?	<p>YES NO</p> <p>Were you weighed? WEIGHT 1 2</p> <p>Was your height measured? HEIGHT 1 2</p> <p>Was your blood pressure measured? BP 1 2</p> <p>Did you give a urine sample? URINE 1 2</p> <p>Did you give a blood sample? BLOOD 1 2</p>		
415	During (any of) your prenatal care visit(s), were you told about the signs of pregnancy complications?	<p>YES 1</p> <p>NO 2</p> <p>(SKIP TO 417) ←</p> <p>DONT KNOW 8</p>		

NO.	QUESTIONS AND FILTERS	LAST BIRTH	NEXT-TO-LAST BIRTH	SECOND-FROM-LAST BIRTH
		NAME _____	NAME _____	NAME _____
416	Were you told where to go if you had any of these complications?	YES 1 NO 2 DONT KNOW 8		
417	What symptoms or conditions did you experience during your pregnancy with (NAME), if any? Anything else?	VAGINAL BLEEDING A HEADACHE B DIZZINESS C BLURRED VISION D SWOLLEN FACE E SWOLLEN HANDS/ FEET F PALE OR ANEMIC G OTHER X (SPECIFY) NONE Y		
418	During this pregnancy, did you set aside any money in case of an emergency?	YES 1 NO 2 CANNOT REMEMBER 8		
419	During this pregnancy, were you given an injection in the arm to prevent the baby from getting tetanus, that is, convulsions after birth?	YES 1 NO 2 (SKIP TO 422) ← DONT KNOW 8		
420	During this pregnancy, how many times did you get this tetanus injection?	TIMES <input type="text"/> DONT KNOW 8		
421	CHECK 420:	2 OR MORE TIMES <input type="checkbox"/> OTHER <input type="checkbox"/> (SKIP TO 426)		
422	At any time before this pregnancy, did you receive any tetanus injections, either to protect yourself or another baby?	YES 1 NO 2 (SKIP TO 426) ← DONT KNOW 8		
423	Before this pregnancy, how many other times did you receive a tetanus injection? IF 7 OR MORE TIMES, RECORD 7.	TIMES <input type="text"/> DONT KNOW 8		
424	In what month and year did you receive the last tetanus injection before this pregnancy?	MONTH <input type="text"/> <input type="text"/> DK MONTH 98 YEAR ... <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> (SKIP TO 426) ← DK YEAR 9998		
425	How many years ago did you receive that tetanus injection?	YEARS AGO <input type="text"/> <input type="text"/>		

NO.	QUESTIONS AND FILTERS	LAST BIRTH	NEXT-TO-LAST BIRTH	SECOND-FROM-LAST BIRTH															
		NAME_____	NAME_____	NAME_____															
426	During this pregnancy, were you given or did you buy any iron tablets or iron capsules? SHOW TABLETS/ CAPSULES	YES 1 NO 2 (SKIP TO 428) ← DONT KNOW 8																	
427	During the whole pregnancy, for how many days did you take the tablets or capsules? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER OF DAYS.	DAYS <input type="text"/> <input type="text"/> <input type="text"/> DONT KNOW 998																	
428	During this pregnancy, did you take any drug for intestinal worms?	YES 1 NO 2 DONT KNOW 8																	
429	During this pregnancy, did you have difficulty with your vision during daylight?	YES 1 NO 2 DONT KNOW 8																	
430	During this pregnancy, did you suffer from night blindness [matang manok]?	YES 1 NO 2 DONT KNOW 8																	
431	Around the time of the birth of (NAME), did you have any of the following problems: Long labor, that is, your regular contractions lasted more than 12 hours? Excessive bleeding, so much that you thought you might die? A high fever with a bad-smelling vaginal discharge? Convulsions not caused by fever?	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>YES</u></th> <th style="text-align: center;"><u>NO</u></th> </tr> </thead> <tbody> <tr> <td>LONG LABOR ...</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>BLEEDING</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>HIGH FEVER ...</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>CONVULSION ...</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> </tbody> </table>		<u>YES</u>	<u>NO</u>	LONG LABOR ...	1	2	BLEEDING	1	2	HIGH FEVER ...	1	2	CONVULSION ...	1	2		
	<u>YES</u>	<u>NO</u>																	
LONG LABOR ...	1	2																	
BLEEDING	1	2																	
HIGH FEVER ...	1	2																	
CONVULSION ...	1	2																	
432	When (NAME) was born, was he/she very large, larger than average, average, smaller than average, or very small?	VERY LARGE 1 LARGER THAN AVERAGE 2 AVERAGE 3 SMALLER THAN AVERAGE 4 VERY SMALL 5 DONT KNOW 8	VERY LARGE 1 LARGER THAN AVERAGE 2 AVERAGE 3 SMALLER THAN AVERAGE 4 VERY SMALL 5 DONT KNOW 8	VERY LARGE 1 LARGER THAN AVERAGE 2 AVERAGE 3 SMALLER THAN AVERAGE 4 VERY SMALL 5 DONT KNOW 8															
433	Was (NAME) weighed at birth?	YES 1 NO 2 (SKIP TO 435) ← DONT KNOW 8	YES 1 NO 2 (SKIP TO 435) ← DONT KNOW 8	YES 1 NO 2 (SKIP TO 435) ← DONT KNOW 8															

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
434	How much did (NAME) weigh? RECORD WEIGHT IN POUNDS FROM HEALTH CARD/BOOKLET, IF AVAILABLE.	FROM CARD/BOOKLET: LBS. 1 [] [] . [] FROM RECALL: LBS. 2 [] [] . [] DONT KNOW 999.8	FROM CARD/BOOKLET: LBS. 1 [] [] . [] FROM RECALL: LBS. 2 [] [] . [] DONT KNOW 999.8	FROM CARD/BOOKLET: LBS. 1 [] [] . [] FROM RECALL: LBS. 2 [] [] . [] DONT KNOW 999.8
435	Who assisted with the delivery of (NAME)? Anyone else? PROBE FOR THE TYPE(S) OF PERSON(S) AND RECORD ALL MENTIONED. IF RESPONDENT SAYS NO ONE ASSISTED, PROBE TO DETERMINE WHETHER ANY ADULTS WERE PRESENT AT THE DELIVERY.	HEALTH PERSONNEL DOCTOR A NURSE B MIDWIFE C OTHER PERSON HILOT D RELATIVE/FRIEND ... E OTHER X (SPECIFY) NO ONE Y	HEALTH PERSONNEL DOCTOR A NURSE B MIDWIFE C OTHER PERSON HILOT D RELATIVE/FRIEND ... E OTHER X (SPECIFY) NO ONE Y	HEALTH PERSONNEL DOCTOR A NURSE B MIDWIFE C OTHER PERSON HILOT D RELATIVE/FRIEND ... E OTHER X (SPECIFY) NO ONE Y
438	How much did you pay in total for the delivery of (NAME)? INCLUDE COST OF DOCTORS, NURSES, HOSPITAL, HILOT, ETC.	COST IN PESOS 1 [] [] [] [] [] DONATION IN PESOS 2 [] [] [] [] [] FREE/NO COST ... 000000 PAYMENT IN KIND . 999998 DOES NOT KNOW . 999998		
437	Where did you give birth to (NAME)? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE WRITE THE NAME OF THE PLACE _____ (NAME OF PLACE)	HOME YOUR HOME 11 (SKIP TO 443) ← OTHER HOME 12 PUBLIC SECTOR GOVT. HOSPITAL ... 21 GOVT. HEALTH CENTER 22 (SKIP TO 439) ← OTHER PUBLIC 26 (SPECIFY) (SKIP TO 439) ← PRIVATE SECTOR PRIVATE HOSPITAL/ CLINIC 31 OTHER PRIVATE 36 (SPECIFY) OTHER 96 (SPECIFY) (SKIP TO 439) ←	HOME YOUR HOME 11 (SKIP TO 444) ← OTHER HOME 12 PUBLIC SECTOR GOVT. HOSPITAL ... 21 GOVT. HEALTH CENTER 22 (SKIP TO 439) ← OTHER PUBLIC 26 (SPECIFY) (SKIP TO 439) ← PRIVATE SECTOR PRIVATE HOSPITAL/ CLINIC 31 OTHER PRIVATE 36 (SPECIFY) OTHER 96 (SPECIFY) (SKIP TO 439) ←	HOME YOUR HOME 11 (SKIP TO 444) ← OTHER HOME 12 PUBLIC SECTOR GOVT. HOSPITAL ... 21 GOVT. HEALTH CENTER 22 (SKIP TO 439) ← OTHER PUBLIC 26 (SPECIFY) (SKIP TO 439) ← PRIVATE SECTOR PRIVATE HOSPITAL/ CLINIC 31 OTHER PRIVATE 36 (SPECIFY) OTHER 96 (SPECIFY) (SKIP TO 439) ←
438	Was (NAME) delivered by caesarean section?	YES 1 NO 2	YES 1 NO 2	YES 1 NO 2
439	Before you were discharged after (NAME) was born, did any health care provider or hiilot check on your health?	YES 1 NO 2 (SKIP TO 442) ←	YES 1 (SKIP TO 455) ← NO 2	YES 1 (SKIP TO 455) ← NO 2

NO.	QUESTIONS AND FILTERS	LAST BIRTH	NEXT-TO-LAST BIRTH	SECOND-FROM-LAST BIRTH
		NAME _____	NAME _____	NAME _____
440	How long after delivery did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS 1 <input type="text"/> <input type="text"/> DAYS 2 <input type="text"/> <input type="text"/> WEEKS 3 <input type="text"/> <input type="text"/> DONT KNOW 998		
441	Who checked on your health at that time? PROBE FOR MOST QUALIFIED PERSON.	HEALTH PERSONNEL DOCTOR 11 NURSE 12 MIDWIFE 13 OTHER PERSON HILOT 21 RELATIVE/FRIEND ... 22 OTHER 96 (SPECIFY) _____ (SKIP TO 453) ←		
442	After you were discharged, did any health care provider or hilot check on your health?	YES 1 (SKIP TO 445) ← NO 2 (SKIP TO 453) ←	YES 1 (SKIP TO 455) ← NO 2	YES 1 (SKIP TO 455) ← NO 2
443	Why didn't you deliver in a health facility? PROBE: Any other reason? RECORD ALL MENTIONED.	COST TOO MUCH A FACILITY NOT OPEN ... B TOO FAR/ NO TRANS- PORTATION C DONT TRUST FACILITY/POOR QUALITY SERVICE ... D NO FEMALE PROVID- ER AT FACILITY E HUSBAND/FAMILY DID NOT ALLOW F NOT NECESSARY G NOT CUSTOMARY H OTHER X (SPECIFY) _____		
444	After (NAME) was born, did any health care provider or hilot check on your health?	YES 1 NO 2 (SKIP TO 449) ←	YES 1 NO 2	YES 1 NO 2
445	How long after delivery did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS 1 <input type="text"/> <input type="text"/> DAYS 2 <input type="text"/> <input type="text"/> WEEKS 3 <input type="text"/> <input type="text"/> DONT KNOW 998		
446	Who checked on your health at that time? PROBE FOR MOST QUALIFIED PERSON.	HEALTH PERSONNEL DOCTOR 11 NURSE 12 MIDWIFE 13 OTHER PERSON HILOT 21 RELATIVE/FRIEND ... 22 OTHER 96 (SPECIFY) _____		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
447	<p>Where did this first check take place?</p> <p>PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE.</p> <p>IF UNABLE TO DETERMINE IF A HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE, WRITE THE NAME OF THE PLACE.</p> <p>_____ (NAME OF PLACE)</p>	<p>HOME YOUR HOME 11 OTHER HOME 12</p> <p>PUBLIC SECTOR GOVT. HOSPITAL ... 21 RURAL HEALTH UNIT/ URBAN HEALTH CENTER 22 BARANGAY HEALTH STATION 23 BARANGAY SUPPLY/ SERVICE POINT OFFICER/BHW ... 24 OTHER PUBLIC ... 26 (SPECIFY)</p> <p>PRIVATE SECTOR PRIVATE HOSPITAL/ CLINIC 31 PRIVATE DOCTOR ... 32 PRIVATE NURSE/ MIDWIFE 33 NGO 34 INDUSTRY-BASED CLINIC 35 OTHER PRIVATE 36 (SPECIFY)</p> <p>OTHER _____ 96 (SPECIFY)</p>		
448	CHECK 442:	<p>YES NOT ASKED</p> <p><input type="checkbox"/> <input type="checkbox"/></p> <p>(SKIP TO 453)</p>		
449	In the two months after (NAME) was born, did any health care provider or hirot check on his/her health?	<p>YES 1 NO 2 (SKIP TO 453) ← DONT KNOW 8</p>		
450	<p>How many hours, days or weeks after the birth of (NAME) did the first check take place?</p> <p>IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.</p>	<p>HRS AFTER BIRTH ... 1 <input type="text"/><input type="text"/></p> <p>DAYS AFTER BIRTH ... 2 <input type="text"/><input type="text"/></p> <p>WKS AFTER BIRTH ... 3 <input type="text"/><input type="text"/></p> <p>DONT KNOW 998</p>		
451	<p>Who checked on (NAME)'s health at that time?</p> <p>PROBE FOR MOST QUALIFIED PERSON.</p>	<p>HEALTH PERSONNEL DOCTOR 11 NURSE 12 MIDWIFE 13</p> <p>OTHER PERSON HILOT 21 RELATIVE/FRIEND ... 22 OTHER _____ 96 (SPECIFY)</p>		

NO.	QUESTIONS AND FILTERS	LAST BIRTH			NEXT-TO-LAST BIRTH			SECOND-FROM-LAST BIRTH		
		NAME _____			NAME _____			NAME _____		
452	<p>Where did this first check of (NAME) take place?</p> <p>PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE.</p> <p>IF UNABLE TO DETERMINE IF A HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE, WRITE THE NAME OF THE PLACE.</p> <p>_____ (NAME OF PLACE)</p>	<p>HOME</p> <p>YOUR HOME 11</p> <p>OTHER HOME 12</p> <p>PUBLIC SECTOR</p> <p>GOVT. HOSPITAL ... 21</p> <p>RURAL HEALTH UNIT/ URBAN HEALTH CENTER 22</p> <p>BARANGAY HEALTH STATION 23</p> <p>BARANGAY SUPPLY/ SERVICE POINT OFFICER/BHW ... 24</p> <p>OTHER PUBLIC 26 (SPECIFY)</p> <p>PRIVATE SECTOR</p> <p>PRIVATE HOSPITAL/ CLINIC 31</p> <p>PRIVATE DOCTOR ... 32</p> <p>PRIVATE NURSE/ MIDWIFE 33</p> <p>NGO 34</p> <p>INDUSTRY-BASED CLINIC 35</p> <p>OTHER PRIVATE 36 (SPECIFY)</p> <p>OTHER 98 (SPECIFY)</p>								
453	<p>In the first two months after delivery, did you receive a vitamin A dose (like this/any of these)?</p> <p>SHOW COMMON TYPES OF AMPULES/CAPSULES/SYRUPS.</p>	<p>YES 1</p> <p>NO 2</p> <p>DONT KNOW 8</p>								
454	<p>Has your menstrual period returned since the birth of (NAME)?</p>	<p>YES 1 (SKIP TO 456) ←</p> <p>NO 2 (SKIP TO 457) ←</p>								
455	<p>Did your period return between the birth of (NAME) and your next pregnancy?</p>		<p>YES 1</p> <p>NO 2 (SKIP TO 459) ←</p>		<p>YES 1</p> <p>NO 2 (SKIP TO 459) ←</p>					
456	<p>For how many months after the birth of (NAME) did you <u>not</u> have a period?</p>	<p>MONTHS <input type="text"/> <input type="text"/></p> <p>DONT KNOW 98</p>	<p>MONTHS <input type="text"/> <input type="text"/></p> <p>DONT KNOW 98</p>		<p>MONTHS <input type="text"/> <input type="text"/></p> <p>DONT KNOW 98</p>					
457	<p>CHECK 233: IS RESPONDENT PREGNANT?</p>	<p>NOT PREG- <input type="checkbox"/> PREGNANT <input type="checkbox"/></p> <p>NANT OR UNSURE (SKIP TO 459) ←</p>								
458	<p>Have you begun to have sexual intercourse again since the birth of (NAME)?</p>	<p>YES 1</p> <p>NO 2 (SKIP TO 460) ←</p>								
459	<p>For how many months after the birth of (NAME) did you <u>not</u> have sexual intercourse?</p>	<p>MONTHS <input type="text"/> <input type="text"/></p> <p>DONT KNOW 98</p>	<p>MONTHS <input type="text"/> <input type="text"/></p> <p>DONT KNOW 98</p>		<p>MONTHS <input type="text"/> <input type="text"/></p> <p>DONT KNOW 98</p>					
460	<p>Did you ever breastfeed (NAME)?</p>	<p>YES 1</p> <p>NO 2 (SKIP TO 469) ←</p>	<p>YES 1</p> <p>NO 2 (SKIP TO 469) ←</p>		<p>YES 1</p> <p>NO 2 (SKIP TO 469) ←</p>					

NO.	QUESTIONS AND FILTERS	LAST BIRTH	NEXT-TO-LAST BIRTH	SECOND-FROM-LAST BIRTH
		NAME _____	NAME _____	NAME _____
461	How long after birth did you first put (NAME) to the breast? PROBE: When did you start breastfeeding (NAME)? IF LESS THAN 1 HOUR, RECORD '00' HOURS. IF LESS THAN 24 HOURS, RECORD HOURS. OTHERWISE, RECORD DAYS.	IMMEDIATELY 000 HOURS 1 <input type="text"/> <input type="text"/> DAYS 2 <input type="text"/> <input type="text"/>		
462	In the first three days after delivery, was (NAME) given anything to drink other than breast milk?	YES 1 NO 2 (SKIP TO 464) ←		
463	What was (NAME) given to drink? Anything else? RECORD ALL LIQUIDS MENTIONED.	MILK (OTHER THAN BREAST MILK) A PLAIN WATER B SUGAR OR GLUCOSE WATER C GRIPPE WATER D SUGAR-SALT-WATER SOLUTION E FRUIT JUICE F INFANT FORMULA G TEA/INFUSION H HONEY I OTHER (SPECIFY) X (SKIP TO 466) ←		
464	Was (NAME) ever given water or anything else to drink or eat other than breastmilk?	YES 1 NO 2 (SKIP TO 466) ←		
465	How many months old was (NAME) when you first started giving him/her any food or liquid other than breastmilk?	MONTHS <input type="text"/> <input type="text"/>		
466	CHECK : 404 IS CHILD LIVING?	LIVING <input type="checkbox"/> DEAD <input type="checkbox"/> (SKIP TO 469) ←		
467	Are you still breastfeeding (NAME)?	YES 1 (SKIP TO 470) ← NO 2		
468	For how many months did you breastfeed (NAME)?	MONTHS <input type="text"/> <input type="text"/> DONT KNOW 98	MONTHS <input type="text"/> <input type="text"/> STILL BF 95 DONT KNOW 98	MONTHS <input type="text"/> <input type="text"/> STILL BF 95 DONT KNOW 98
469	CHECK 404: IS CHILD LIVING?	LIVING <input type="checkbox"/> DEAD <input type="checkbox"/> (SKIP TO 472) (GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 501)	LIVING <input type="checkbox"/> DEAD <input type="checkbox"/> (SKIP TO 472) (GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 501)	LIVING <input type="checkbox"/> DEAD <input type="checkbox"/> (SKIP TO 472) (GO BACK TO 405 IN THE NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE, OR IF NO MORE BIRTHS, GO TO 501)

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME_____	NEXT-TO-LAST BIRTH NAME_____	SECOND-FROM-LAST BIRTH NAME_____
470	How many times did you breastfeed last night between sunset and sunrise? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER.	NUMBER OF NIGHTTIME FEEDINGS <input type="text"/> <input type="text"/>		
471	How many times did you breastfeed yesterday during the daylight hours? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER.	NUMBER OF DAYLIGHT FEEDINGS <input type="text"/> <input type="text"/>		
472	Did (NAME) drink anything from a bottle with a nipple yesterday or last night?	YES 1 NO 2 DONT KNOW 8	YES 1 NO 2 DONT KNOW 8	YES 1 NO 2 DONT KNOW 8
473		GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 501.	GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 501.	GO BACK TO 405 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE, OR IF NO MORE BIRTHS, GO TO 501.



SECTION 5. CHILD IMMUNIZATION AND HEALTH AND CHILD'S AND WOMAN'S NUTRITION

501	ENTER IN THE TABLE THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 2003 OR LATER. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 3 BIRTHS, USE LAST 2 COLUMNS OF ADDITIONAL QUESTIONNAIRES).																																																																																																																																				
502	LINE NUMBER FROM 214	LAST BIRTH LINE NO. <input type="text"/>	NEXT-TO-LAST BIRTH LINE NO. <input type="text"/>	SECOND-FROM-LAST BIRTH LINE NO. <input type="text"/>																																																																																																																																	
503	FROM 218 AND 221	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/> (GO TO 503 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 554)	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/> (GO TO 503 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 554)	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/> (GO TO 503 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 554)																																																																																																																																	
504	Do you have a card/booklet where (NAME'S) vaccinations are written down? IF YES: May I see it please?	YES, SEEN 1 (SKIP TO 506) ← YES, NOT SEEN 2 (SKIP TO 508) ← NO CARD/BOOKLET 3	YES, SEEN 1 (SKIP TO 506) ← YES, NOT SEEN 2 (SKIP TO 508) ← NO CARD/BOOKLET 3	YES, SEEN 1 (SKIP TO 506) ← YES, NOT SEEN 2 (SKIP TO 508) ← NO CARD/BOOKLET 3																																																																																																																																	
505	Did you ever have a vaccination card/booklet for (NAME)?	YES 1 (SKIP TO 508) ← NO 2	YES 1 (SKIP TO 508) ← NO 2	YES 1 (SKIP TO 508) ← NO 2																																																																																																																																	
506	<p>(1) COPY VACCINATION DATE FOR EACH VACCINE FROM THE CARD/BOOKLET. (2) WRITE '40' IN 'MONTH' COLUMN IF CARD/BOOKLET SHOWS THAT A VACCINATION WAS GIVEN BEFORE THE CHILD'S FIRST BIRTHDAY BUT NO DATE IS RECORDED. (3) WRITE '41' IN 'MONTH' COLUMN IF CARD/BOOKLET SHOWS THAT A VACCINATION WAS GIVEN AFTER THE CHILD'S FIRST BIRTHDAY BUT NO DATE IS RECORDED.</p> <table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="3">LAST BIRTH</th> <th colspan="3">NEXT-TO-LAST BIRTH</th> <th colspan="3">SECOND-TO-LAST BIRTH</th> </tr> <tr> <th>MONTH</th> <th>DAY</th> <th>YEAR</th> <th>MONTH</th> <th>DAY</th> <th>YEAR</th> <th>MONTH</th> <th>DAY</th> <th>YEAR</th> </tr> </thead> <tbody> <tr><td>BCG</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>POLIO 1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>POLIO 2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>POLIO 3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>DPT 1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>DPT 2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>DPT 3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>MEASLES</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>HEPA B1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>HEPA B2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>HEPA B3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>					LAST BIRTH			NEXT-TO-LAST BIRTH			SECOND-TO-LAST BIRTH			MONTH	DAY	YEAR	MONTH	DAY	YEAR	MONTH	DAY	YEAR	BCG										POLIO 1										POLIO 2										POLIO 3										DPT 1										DPT 2										DPT 3										MEASLES										HEPA B1										HEPA B2										HEPA B3									
	LAST BIRTH			NEXT-TO-LAST BIRTH			SECOND-TO-LAST BIRTH																																																																																																																														
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506 A	CHECK 506:	BCG TO HEPA B3 ALL RECORDED <input type="checkbox"/> (GO TO 5090)	OTHER <input type="checkbox"/>	BCG TO HEPA B3 ALL RECORDED <input type="checkbox"/> (GO TO 5090)	OTHER <input type="checkbox"/>	BCG TO HEPA B3 ALL RECORDED <input type="checkbox"/> (GO TO 5090)	OTHER <input type="checkbox"/>																																																																																																																														

NO.	QUESTIONS AND FILTERS	LAST BIRTH			NEXT-TO-LAST BIRTH			SECOND-FROM-LAST BIRTH		
		NAME _____			NAME _____			NAME _____		
507	Has (NAME) received any vaccinations that are not recorded on this card/ booklet including vaccinations received in a national immunization day campaign? RECORD 'YES' ONLY IF RESPONDENT MENTIONS BCG, POLIO 1-3, DPT 1-3, HEPA B1-B3 AND/OR MEASLES VACCINES.	YES 1 (PROBE FOR VACCINATIONS AND WRITE '60' IF RECEIVED BEFORE AGE 1 OR '61' IF AFTER AGE 1 IN THE CORRESPONDING MONTH COLUMN IN 506) (SKIP TO 509O) ←	YES 1 (PROBE FOR VACCINATIONS AND WRITE '60' IF RECEIVED BEFORE AGE 1 OR '61' IF AFTER AGE 1 IN THE CORRESPONDING MONTH COLUMN IN 506) (SKIP TO 509O) ←	YES 1 (PROBE FOR VACCINATIONS AND WRITE '60' IF RECEIVED BEFORE AGE 1 OR '61' IF AFTER AGE 1 IN THE CORRESPONDING MONTH COLUMN IN 506) (SKIP TO 509O) ←	NO 2 (SKIP TO 509O) ←	NO 2 (SKIP TO 509O) ←	NO 2 (SKIP TO 509O) ←	DON'T KNOW 8	DON'T KNOW 8	DON'T KNOW 8
508	Did (NAME) ever receive any vaccinations to prevent him/her from getting diseases, including vaccinations received in a national immunization campaign?	YES 1 NO 2 (SKIP TO 510) ←	YES 1 NO 2 (SKIP TO 510) ←	YES 1 NO 2 (SKIP TO 510) ←	DON'T KNOW 8	DON'T KNOW 8	DON'T KNOW 8	DON'T KNOW 8	DON'T KNOW 8	DON'T KNOW 8
509	Please tell me if (NAME) received any of the following vaccinations:									
509A	A BCG vaccination against tuberculosis, that is, an injection in the arm or shoulder that usually causes a scar?	YES 1 NO 2 (SKIP TO 509C) ←	YES 1 NO 2 (SKIP TO 509C) ←	YES 1 NO 2 (SKIP TO 509C) ←	DON'T KNOW 8	DON'T KNOW 8	DON'T KNOW 8	DON'T KNOW 8	DON'T KNOW 8	DON'T KNOW 8
509B	Did (NAME) receive the BCG vaccine before his/her first birthday?	YES 1 NO 2	YES 1 NO 2	YES 1 NO 2						
509C	Polio vaccine, that is, injection or drops in the mouth?	YES 1 NO 2 (SKIP TO 509G) ←	YES 1 NO 2 (SKIP TO 509G) ←	YES 1 NO 2 (SKIP TO 509G) ←	DON'T KNOW 8	DON'T KNOW 8	DON'T KNOW 8	DON'T KNOW 8	DON'T KNOW 8	DON'T KNOW 8
509D	Was the first polio vaccine received in the first two weeks after birth or later?	FIRST 2 WEEKS 1 LATER 2	FIRST 2 WEEKS 1 LATER 2	FIRST 2 WEEKS 1 LATER 2						
509E	How many times was the polio vaccine received?	NUMBER OF TIMES <input type="text"/>	NUMBER OF TIMES <input type="text"/>	NUMBER OF TIMES <input type="text"/>						
509F	Did (NAME) receive the third (last) polio vaccine before his/her first birthday?	YES 1 NO 2	YES 1 NO 2	YES 1 NO 2						
509G	A DPT vaccination, that is, an injection given in the thigh or buttocks, sometimes at the same time as polio vaccine?	YES 1 NO 2 (SKIP TO 509J) ←	YES 1 NO 2 (SKIP TO 509J) ←	YES 1 NO 2 (SKIP TO 509J) ←	DON'T KNOW 8	DON'T KNOW 8	DON'T KNOW 8	DON'T KNOW 8	DON'T KNOW 8	DON'T KNOW 8
509H	How many times was a DPT vaccination received?	NUMBER OF TIMES <input type="text"/>	NUMBER OF TIMES <input type="text"/>	NUMBER OF TIMES <input type="text"/>						
509I	Did (NAME) receive the third (last) DPT vaccine before his/her first birthday?	YES 1 NO 2	YES 1 NO 2	YES 1 NO 2						

NO.	QUESTIONS AND FILTERS	LAST BIRTH	NEXT-TO-LAST BIRTH	SECOND-FROM-LAST BIRTH
		NAME _____	NAME _____	NAME _____
509J	A measles injection or an MR injection-that is, a shot in the arm at the age of 9 months or older - to prevent him/her from getting measles?	YES 1 NO 2 (SKIP TO 509L) ← DONT KNOW 8	YES 1 NO 2 (SKIP TO 509L) ← DONT KNOW 8	YES 1 NO 2 (SKIP TO 509L) ← DONT KNOW 8
509K	Did (NAME) receive the measles vaccine before his/her first birthday?	YES 1 NO 2	YES 1 NO 2	YES 1 NO 2
509L	A Hepatitis B vaccine, that is, an injection given in the thigh or arm, to prevent him/her from getting liver diseases?	YES 1 NO 2 (SKIP TO 510) ← DONT KNOW 8	YES 1 NO 2 (SKIP TO 510) ← DONT KNOW 8	YES 1 NO 2 (SKIP TO 510) ← DONT KNOW 8
509M	How many times was a Hepatitis B injection received?	NUMBER OF TIMES <input type="text"/>	NUMBER OF TIMES <input type="text"/>	NUMBER OF TIMES <input type="text"/>
509N	Did (NAME) receive the third (last) Hepatitis B vaccine before his/her first birthday?	YES 1 NO 2	YES 1 NO 2	YES 1 NO 2
509O	How much did one Hepatitis B injection cost? IF NO HEPATITIS-B IN THE CARD/BOOKLET, SKIP TO 510.	COST IN PESOS 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> DONATION IN PESOS 2 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> FREE 00000 IN KIND 99998 DONT KNOW ... 99998	COST IN PESOS 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> DONATION IN PESOS 2 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> FREE 00000 IN KIND 99998 DONT KNOW ... 99998	COST IN PESOS 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> DONATION IN PESOS 2 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> FREE 00000 IN KIND 99998 DONT KNOW ... 99998
510	Has (NAME) ever received a vitamin A dose (like this/ any of these)? SHOW SAMPLES OF VITAMIN A AMPULES/ CAPSULES/SYRUPS	YES 1 NO 2 (SKIP TO 512) ← DONT KNOW 8	YES 1 NO 2 (SKIP TO 512) ← DONT KNOW 8	YES 1 NO 2 (SKIP TO 512) ← DONT KNOW 8
511	Did (NAME) receive a vitamin A dose within the last six months?	YES 1 NO 2 DONT KNOW 8	YES 1 NO 2 DONT KNOW 8	YES 1 NO 2 DONT KNOW 8
512	In the last seven days, did (NAME) take iron pills or iron syrup/drops (like this/ any of these)? SHOW SAMPLES OF IRON PILLS/SYRUPS.	YES 1 NO 2 DONT KNOW 8	YES 1 NO 2 DONT KNOW 8	YES 1 NO 2 DONT KNOW 8
513	Has (NAME) taken any drug for intestinal worms in the last six months?	YES 1 NO 2 DONT KNOW 8	YES 1 NO 2 DONT KNOW 8	YES 1 NO 2 DONT KNOW 8
514	Has (NAME) had diarrhea in the last 2 weeks?	YES 1 NO 2 (SKIP TO 530) ← DONT KNOW 8	YES 1 NO 2 (SKIP TO 530) ← DONT KNOW 8	YES 1 NO 2 (SKIP TO 530) ← DONT KNOW 8
515	Was there any blood in the stools?	YES 1 NO 2 DONT KNOW 8	YES 1 NO 2 DONT KNOW 8	YES 1 NO 2 DONT KNOW 8

NO.	QUESTIONS AND FILTERS	LAST BIRTH	NEXT-TO-LAST BIRTH	SECOND-FROM-LAST BIRTH
		NAME _____	NAME _____	NAME _____
516	<p>Now I would like to know how much (NAME) was given to drink during the diarrhea (including breastmilk).</p> <p>Was he/she given less than usual to drink, about the same amount, more than usual or nothing to drink?</p> <p>IF LESS, PROBE: Was he/she given much less than usual to drink or somewhat less?</p>	<p>MUCH LESS 1</p> <p>SOMEWHAT LESS ... 2</p> <p>ABOUT THE SAME ... 3</p> <p>MORE 4</p> <p>NOTHING TO DRINK . 5</p> <p>DON'T KNOW 8</p>	<p>MUCH LESS 1</p> <p>SOMEWHAT LESS ... 2</p> <p>ABOUT THE SAME ... 3</p> <p>MORE 4</p> <p>NOTHING TO DRINK . 5</p> <p>DON'T KNOW 8</p>	<p>MUCH LESS 1</p> <p>SOMEWHAT LESS ... 2</p> <p>ABOUT THE SAME ... 3</p> <p>MORE 4</p> <p>NOTHING TO DRINK . 5</p> <p>DON'T KNOW 8</p>
517	<p>When (NAME) had diarrhea, was he/she given less than usual to eat, about the same amount, more than usual, or nothing to eat?</p> <p>IF LESS, PROBE: Was he/she given much less than usual to eat or somewhat less?</p>	<p>MUCH LESS 1</p> <p>SOMEWHAT LESS ... 2</p> <p>ABOUT THE SAME ... 3</p> <p>MORE 4</p> <p>NOTHING TO EAT ... 5</p> <p>DON'T KNOW 8</p>	<p>MUCH LESS 1</p> <p>SOMEWHAT LESS ... 2</p> <p>ABOUT THE SAME ... 3</p> <p>MORE 4</p> <p>NOTHING TO EAT ... 5</p> <p>DON'T KNOW 8</p>	<p>MUCH LESS 1</p> <p>SOMEWHAT LESS ... 2</p> <p>ABOUT THE SAME ... 3</p> <p>MORE 4</p> <p>NOTHING TO EAT ... 5</p> <p>DON'T KNOW 8</p>
518	<p>Did you seek advice or treatment for the diarrhea from any source?</p>	<p>YES 1</p> <p>NO 2</p> <p>(SKIP TO 524) ←</p>	<p>YES 1</p> <p>NO 2</p> <p>(SKIP TO 524) ←</p>	<p>YES 1</p> <p>NO 2</p> <p>(SKIP TO 524) ←</p>
519	<p>Where did you seek advice or treatment?</p> <p>Anywhere/anyone else?</p> <p>PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S).</p> <p>IF UNABLE TO DETERMINE IF A HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE, WRITE THE NAME OF THE PLACE.</p> <p>_____</p> <p>_____</p> <p>(NAME OF PLACE(S))</p>	<p>PUBLIC SECTOR</p> <p>GOVT. HOSPITAL . A</p> <p>RURAL HEALTH UNIT (RHU)/ URBAN HEALTH CENTER (UHC) . B</p> <p>BARANGAY HEALTH STATION (BHS) . C</p> <p>BARANGAY SUPPLY/ SERVICE POINT OFFICER/BHW . D</p> <p>OTHER PUBLIC _____ E</p> <p>(SPECIFY)</p> <p>PRIVATE SECTOR</p> <p>PRIVATE HOSPITAL OR CLINIC F</p> <p>PHARMACY G</p> <p>PRIVATE DOCTOR . H</p> <p>PRIVATE NURSE/ MIDWIFE I</p> <p>NGO J</p> <p>INDUSTRY-BASED CLINIC K</p> <p>OTHER PRIVATE _____ L</p> <p>(SPECIFY)</p> <p>OTHERS</p> <p>PUERICULTURE CENTER M</p> <p>STORE N</p> <p>CHURCH O</p> <p>FRIENDS/ RELATIVES P</p> <p>OTHER X</p> <p>(SPECIFY)</p>	<p>PUBLIC SECTOR</p> <p>GOVT. HOSPITAL . A</p> <p>RURAL HEALTH UNIT (RHU)/ URBAN HEALTH CENTER (UHC) . B</p> <p>BARANGAY HEALTH STATION (BHS) . C</p> <p>BARANGAY SUPPLY/ SERVICE POINT OFFICER/BHW . D</p> <p>OTHER PUBLIC _____ E</p> <p>(SPECIFY)</p> <p>PRIVATE SECTOR</p> <p>PRIVATE HOSPITAL OR CLINIC F</p> <p>PHARMACY G</p> <p>PRIVATE DOCTOR . H</p> <p>PRIVATE NURSE/ MIDWIFE I</p> <p>NGO J</p> <p>INDUSTRY-BASED CLINIC K</p> <p>OTHER PRIVATE _____ L</p> <p>(SPECIFY)</p> <p>OTHERS</p> <p>PUERICULTURE CENTER M</p> <p>STORE N</p> <p>CHURCH O</p> <p>FRIENDS/ RELATIVES P</p> <p>OTHER X</p> <p>(SPECIFY)</p>	<p>PUBLIC SECTOR</p> <p>GOVT. HOSPITAL . A</p> <p>RURAL HEALTH UNIT (RHU)/ URBAN HEALTH CENTER (UHC) . B</p> <p>BARANGAY HEALTH STATION (BHS) . C</p> <p>BARANGAY SUPPLY/ SERVICE POINT OFFICER/BHW . D</p> <p>OTHER PUBLIC _____ E</p> <p>(SPECIFY)</p> <p>PRIVATE SECTOR</p> <p>PRIVATE HOSPITAL OR CLINIC F</p> <p>PHARMACY G</p> <p>PRIVATE DOCTOR . H</p> <p>PRIVATE NURSE/ MIDWIFE I</p> <p>NGO J</p> <p>INDUSTRY-BASED CLINIC K</p> <p>OTHER PRIVATE _____ L</p> <p>(SPECIFY)</p> <p>OTHERS</p> <p>PUERICULTURE CENTER M</p> <p>STORE N</p> <p>CHURCH O</p> <p>FRIENDS/ RELATIVES P</p> <p>OTHER X</p> <p>(SPECIFY)</p>

NO.	QUESTIONS AND FILTERS	LAST BIRTH		NEXT-TO-LAST BIRTH		SECOND-FROM-LAST BIRTH	
		NAME _____		NAME _____		NAME _____	
534	CHECK 530: HAD FEVER?	YES <input type="checkbox"/> ↓	NO OR DK <input type="checkbox"/> ↓ (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 551)	YES <input type="checkbox"/> ↓	NO OR DK <input type="checkbox"/> ↓ (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 551)	YES <input type="checkbox"/> ↓	NO OR DK <input type="checkbox"/> ↓ (GO TO 503 IN NEXT-TO LAST COLUMN OF NEW QUESTIONNAIRE; OR IF NO MORE BIRTHS, GO TO 551)
535	Now I would like to know how much (NAME) was given to drink (including breastmilk) during the illness with a (fever/cough). Was he/she given less than usual to drink, about the same amount, more than usual or nothing to drink? IF LESS, PROBE: Was he/she given much less than usual to drink or somewhat less?	MUCH LESS 1 SOMEWHAT LESS ... 2 ABOUT THE SAME ... 3 MORE 4 NOTHING TO DRINK . 5 DONT KNOW 8	MUCH LESS 1 SOMEWHAT LESS ... 2 ABOUT THE SAME ... 3 MORE 4 NOTHING TO DRINK . 5 DONT KNOW 8	MUCH LESS 1 SOMEWHAT LESS ... 2 ABOUT THE SAME ... 3 MORE 4 NOTHING TO DRINK . 5 DONT KNOW 8	MUCH LESS 1 SOMEWHAT LESS ... 2 ABOUT THE SAME ... 3 MORE 4 NOTHING TO DRINK . 5 DONT KNOW 8	MUCH LESS 1 SOMEWHAT LESS ... 2 ABOUT THE SAME ... 3 MORE 4 NOTHING TO DRINK . 5 DONT KNOW 8	MUCH LESS 1 SOMEWHAT LESS ... 2 ABOUT THE SAME ... 3 MORE 4 NOTHING TO DRINK . 5 DONT KNOW 8
536	When (NAME) had a (fever/cough), was he/she given less than usual to eat, about the same amount, more than usual, or nothing to eat? IF LESS, PROBE: Was he/she given much less than usual to eat or somewhat less?	MUCH LESS 1 SOMEWHAT LESS ... 2 ABOUT THE SAME ... 3 MORE 4 STOPPED FOOD 5 NEVER GAVE FOOD . 6 DONT KNOW 8	MUCH LESS 1 SOMEWHAT LESS ... 2 ABOUT THE SAME ... 3 MORE 4 STOPPED FOOD 5 NEVER GAVE FOOD . 6 DONT KNOW 8	MUCH LESS 1 SOMEWHAT LESS ... 2 ABOUT THE SAME ... 3 MORE 4 STOPPED FOOD 5 NEVER GAVE FOOD . 6 DONT KNOW 8	MUCH LESS 1 SOMEWHAT LESS ... 2 ABOUT THE SAME ... 3 MORE 4 STOPPED FOOD 5 NEVER GAVE FOOD . 6 DONT KNOW 8	MUCH LESS 1 SOMEWHAT LESS ... 2 ABOUT THE SAME ... 3 MORE 4 STOPPED FOOD 5 NEVER GAVE FOOD . 6 DONT KNOW 8	MUCH LESS 1 SOMEWHAT LESS ... 2 ABOUT THE SAME ... 3 MORE 4 STOPPED FOOD 5 NEVER GAVE FOOD . 6 DONT KNOW 8
537	Did you seek advice or treatment for the illness from any source?	YES 1 NO 2 (SKIP TO 543) ←	YES 1 NO 2 (SKIP TO 543) ←	YES 1 NO 2 (SKIP TO 543) ←	YES 1 NO 2 (SKIP TO 543) ←	YES 1 NO 2 (SKIP TO 543) ←	YES 1 NO 2 (SKIP TO 543) ←

NO.	QUESTIONS AND FILTERS	LAST BIRTH	NEXT-TO-LAST BIRTH	SECOND-FROM-LAST BIRTH
		NAME _____	NAME _____	NAME _____
538	<p>Where did you seek advice or treatment?</p> <p>Anywhere else?</p> <p>PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S).</p> <p>IF UNABLE TO DETERMINE IF A HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE, WRITE THE NAME OF THE PLACE.</p> <p>_____</p> <p>_____</p> <p>(NAME OF PLACE(S))</p>	<p>PUBLIC SECTOR</p> <p>GOVT. HOSPITAL . A</p> <p>RURAL HEALTH UNIT (RHU)/ URBAN HEALTH CENTER (UHC) . B</p> <p>BARANGAY HEALTH STATION (BHS) . C</p> <p>BARANGAY SUPPLY/ SERVICE POINT OFFICER/BHW . D</p> <p>OTHER PUBLIC _____ . E</p> <p>(SPECIFY)</p> <p>PRIVATE SECTOR</p> <p>PRIVATE HOSPITAL OR CLINIC F</p> <p>PHARMACY G</p> <p>PRIVATE DOCTOR . H</p> <p>PRIVATE NURSE/ MIDWIFE I</p> <p>NGO J</p> <p>INDUSTRY-BASED CLINIC K</p> <p>OTHER PRIVATE _____ . L</p> <p>(SPECIFY)</p> <p>OTHERS</p> <p>PUERICULTURE CENTER M</p> <p>STORE N</p> <p>CHURCH O</p> <p>FRIENDS/ RELATIVES P</p> <p>OTHER X</p> <p>(SPECIFY)</p>	<p>PUBLIC SECTOR</p> <p>GOVT. HOSPITAL . A</p> <p>RURAL HEALTH UNIT (RHU)/ URBAN HEALTH CENTER (UHC) . B</p> <p>BARANGAY HEALTH STATION (BHS) . C</p> <p>BARANGAY SUPPLY/ SERVICE POINT OFFICER/BHW . D</p> <p>OTHER PUBLIC _____ . E</p> <p>(SPECIFY)</p> <p>PRIVATE SECTOR</p> <p>PRIVATE HOSPITAL OR CLINIC F</p> <p>PHARMACY G</p> <p>PRIVATE DOCTOR . H</p> <p>PRIVATE NURSE/ MIDWIFE I</p> <p>NGO J</p> <p>INDUSTRY-BASED CLINIC K</p> <p>OTHER PRIVATE _____ . L</p> <p>(SPECIFY)</p> <p>OTHERS</p> <p>PUERICULTURE CENTER M</p> <p>STORE N</p> <p>CHURCH O</p> <p>FRIENDS/ RELATIVES P</p> <p>OTHER X</p> <p>(SPECIFY)</p>	<p>PUBLIC SECTOR</p> <p>GOVT. HOSPITAL . A</p> <p>RURAL HEALTH UNIT (RHU)/ URBAN HEALTH CENTER (UHC) . B</p> <p>BARANGAY HEALTH STATION (BHS) . C</p> <p>BARANGAY SUPPLY/ SERVICE POINT OFFICER/BHW . D</p> <p>OTHER PUBLIC _____ . E</p> <p>(SPECIFY)</p> <p>PRIVATE SECTOR</p> <p>PRIVATE HOSPITAL OR CLINIC F</p> <p>PHARMACY G</p> <p>PRIVATE DOCTOR . H</p> <p>PRIVATE NURSE/ MIDWIFE I</p> <p>NGO J</p> <p>INDUSTRY-BASED CLINIC K</p> <p>OTHER PRIVATE _____ . L</p> <p>(SPECIFY)</p> <p>OTHERS</p> <p>PUERICULTURE CENTER M</p> <p>STORE N</p> <p>CHURCH O</p> <p>FRIENDS/ RELATIVES P</p> <p>OTHER X</p> <p>(SPECIFY)</p>
539	CHECK 538:	<p>TWO OR ONLY</p> <p><input type="checkbox"/> MORE ONE <input type="checkbox"/></p> <p>CODES CODE</p> <p><input type="checkbox"/> CIRCLED <input type="checkbox"/></p> <p>(SKIP TO 541) ←</p>	<p>TWO OR ONLY</p> <p><input type="checkbox"/> MORE ONE <input type="checkbox"/></p> <p>CODES CODE</p> <p><input type="checkbox"/> CIRCLED <input type="checkbox"/></p> <p>(SKIP TO 541) ←</p>	<p>TWO OR ONLY</p> <p><input type="checkbox"/> MORE ONE <input type="checkbox"/></p> <p>CODES CODE</p> <p><input type="checkbox"/> CIRCLED <input type="checkbox"/></p> <p>(SKIP TO 541) ←</p>
540	<p>Where did you first seek advice or treatment?</p> <p>USE LETTER CODE FROM 538.</p>	FIRST PLACE <input type="checkbox"/>	FIRST PLACE <input type="checkbox"/>	FIRST PLACE <input type="checkbox"/>
541	<p>How many days after the illness began did you first seek advice or treatment for (NAME)?</p> <p>IF THE SAME DAY, RECORD '00'.</p>	DAYS <input type="text"/> <input type="text"/>	DAYS <input type="text"/> <input type="text"/>	DAYS <input type="text"/> <input type="text"/>

NO.	QUESTIONS AND FILTERS	LAST BIRTH	NEXT-TO-LAST BIRTH	SECOND-FROM-LAST BIRTH
		NAME _____	NAME _____	NAME _____
542	How much did the treatment cost? IF MORE THAN ONE TREATMENT, REPORT THE COST OF THE FIRST TREATMENT.	COST IN PESOS 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> DONATION IN PESOS 2 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> FREE 000000 IN KIND 999996 DON'T KNOW ... 999998	COST IN PESOS 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> DONATION IN PESOS 2 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> FREE 000000 IN KIND 999996 DON'T KNOW ... 999998	COST IN PESOS 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> DONATION IN PESOS 2 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> FREE 000000 IN KIND 999996 DON'T KNOW ... 999998
543	Is (NAME) still sick with a (fever/cough)?	FEVER ONLY 1 COUGH ONLY 2 BOTH FEVER AND COUGH 3 NO, NEITHER 4 DON'T KNOW 8	FEVER ONLY 1 COUGH ONLY 2 BOTH FEVER AND COUGH 3 NO, NEITHER 4 DON'T KNOW 8	FEVER ONLY 1 COUGH ONLY 2 BOTH FEVER AND COUGH 3 NO, NEITHER 4 DON'T KNOW 8
544	At any time during the illness, did (NAME) take any drugs for the illness?	YES 1 NO 2 (GO BACK TO 503 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 551) DON'T KNOW 8	YES 1 NO 2 (GO BACK TO 503 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 551) DON'T KNOW 8	YES 1 NO 2 (GO BACK TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR IF NO MORE BIRTHS, GO TO 551) DON'T KNOW 8
545	What drugs did (NAME) take? Any other drugs? RECORD ALL MENTIONED. EXAMPLES OF PARACETAMOL: TEMPRA, BIOGESIC, CALPOL, PANADOL EXAMPLES OF IBUPROFEN: DOLAN, ADVIL, MEDICOL EXAMPLES OF DECONGESTANT: DIMETAPP, TYLENOL PLUS FLU	ANTIMALARIAL DRUGS ARALEN A CHLOROQUINE ... B DYMALAR C FANSIDAR D QUI-SUL E OTHER ANTI-MALARIAL F (SPECIFY) ANTIBIOTIC DRUGS PILL/SYRUP G INJECTION H OTHER DRUGS ASPIRIN I PARACETAMOL ... J IBUPROFEN K DECONGESTANT . L OTHER X (SPECIFY) DON'T KNOW Z	ANTIMALARIAL DRUGS ARALEN A CHLOROQUINE ... B DYMALAR C FANSIDAR D QUI-SUL E OTHER ANTI-MALARIAL F (SPECIFY) ANTIBIOTIC DRUGS PILL/SYRUP G INJECTION H OTHER DRUGS ASPIRIN I PARACETAMOL ... J IBUPROFEN K DECONGESTANT . L OTHER X (SPECIFY) DON'T KNOW Z	ANTIMALARIAL DRUGS ARALEN A CHLOROQUINE ... B DYMALAR C FANSIDAR D QUI-SUL E OTHER ANTI-MALARIAL F (SPECIFY) ANTIBIOTIC DRUGS PILL/SYRUP G INJECTION H OTHER DRUGS ASPIRIN I PARACETAMOL ... J IBUPROFEN K DECONGESTANT . L OTHER X (SPECIFY) DON'T KNOW Z
546	CHECK 545: ANY CODE A-F CIRCLED?	YES <input type="checkbox"/> NO <input type="checkbox"/> ↓ (SKIP TO 548)	YES <input type="checkbox"/> NO <input type="checkbox"/> ↓ (SKIP TO 548)	YES <input type="checkbox"/> NO <input type="checkbox"/> ↓ (SKIP TO 548)

NO.	QUESTIONS AND FILTERS	LAST BIRTH		NEXT-TO-LAST BIRTH		SECOND-FROM-LAST BIRTH	
		NAME _____	NAME _____	NAME _____	NAME _____	NAME _____	NAME _____
547	How long after the fever started did (NAME) first take the drugs?	SAME DAY..... 0 NEXT DAY..... 1 2 DAYS AFTER FEVER 2 3 DAYS AFTER FEVER 3 4 OR MORE DAYS AFTER FEVEF..... 4 DONT KNOW 8	SAME DAY..... 0 NEXT DAY..... 1 2 DAYS AFTER FEVER 2 3 DAYS AFTER FEVER 3 4 OR MORE DAYS AFTER FEVEF..... 4 DONT KNOW 8	SAME DAY..... 0 NEXT DAY..... 1 2 DAYS AFTER FEVER 2 3 DAYS AFTER FEVER 3 4 OR MORE DAYS AFTER FEVEF..... 4 DONT KNOW 8	SAME DAY..... 0 NEXT DAY..... 1 2 DAYS AFTER FEVER 2 3 DAYS AFTER FEVER 3 4 OR MORE DAYS AFTER FEVEF..... 4 DONT KNOW 8	SAME DAY..... 0 NEXT DAY..... 1 2 DAYS AFTER FEVER 2 3 DAYS AFTER FEVER 3 4 OR MORE DAYS AFTER FEVEF..... 4 DONT KNOW 8	SAME DAY..... 0 NEXT DAY..... 1 2 DAYS AFTER FEVER 2 3 DAYS AFTER FEVER 3 4 OR MORE DAYS AFTER FEVEF..... 4 DONT KNOW 8
548	CHECK 545: ANY CODE A-G CIRCLED?	YES NO <input type="checkbox"/> <input type="checkbox"/> ↓ ↓ (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 551)	YES NO <input type="checkbox"/> <input type="checkbox"/> ↓ ↓ (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 551)	YES NO <input type="checkbox"/> <input type="checkbox"/> ↓ ↓ (GO TO NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR IF NO MORE BIRTHS, GO TO 551)	YES NO <input type="checkbox"/> <input type="checkbox"/> ↓ ↓ (GO TO NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR IF NO MORE BIRTHS, GO TO 551)	YES NO <input type="checkbox"/> <input type="checkbox"/> ↓ ↓ (GO TO NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR IF NO MORE BIRTHS, GO TO 551)	YES NO <input type="checkbox"/> <input type="checkbox"/> ↓ ↓ (GO TO NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR IF NO MORE BIRTHS, GO TO 551)
549	Did you already have (NAME OF DRUG FROM 545) at home when the child became ill? ASK SEPARATELY FOR EACH OF THE DRUGS 'A' THROUGH 'G' THAT THE CHILD IS RECORDED AS HAVING TAKEN IN 545. IF YES FOR ANY DRUG, CIRCLE CODE FOR THAT DRUG. IF NO FOR ALL DRUGS, CIRCLE 'Y'.	ANTIMALARIAL DRUGS ARALEN A CHLOROQUINE ... B DYMALAR C FANSIDAR D QUI-SUL E OTHER ANTI- MALARIAL F (SPECIFY) ANTIBIOTIC PILL/ SYRUP G NO DRUG AT HOME Y	ANTIMALARIAL DRUGS ARALEN A CHLOROQUINE ... B DYMALAR C FANSIDAR D QUI-SUL E OTHER ANTI- MALARIAL F (SPECIFY) ANTIBIOTIC PILL/ SYRUP G NO DRUG AT HOME Y	ANTIMALARIAL DRUGS ARALEN A CHLOROQUINE ... B DYMALAR C FANSIDAR D QUI-SUL E OTHER ANTI- MALARIAL F (SPECIFY) ANTIBIOTIC PILL/ SYRUP G NO DRUG AT HOME Y	ANTIMALARIAL DRUGS ARALEN A CHLOROQUINE ... B DYMALAR C FANSIDAR D QUI-SUL E OTHER ANTI- MALARIAL F (SPECIFY) ANTIBIOTIC PILL/ SYRUP G NO DRUG AT HOME Y	ANTIMALARIAL DRUGS ARALEN A CHLOROQUINE ... B DYMALAR C FANSIDAR D QUI-SUL E OTHER ANTI- MALARIAL F (SPECIFY) ANTIBIOTIC PILL/ SYRUP G NO DRUG AT HOME Y	ANTIMALARIAL DRUGS ARALEN A CHLOROQUINE ... B DYMALAR C FANSIDAR D QUI-SUL E OTHER ANTI- MALARIAL F (SPECIFY) ANTIBIOTIC PILL/ SYRUP G NO DRUG AT HOME Y
550		GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 551.	GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 551.	GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 551.	GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 551.	GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 551.	GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 551.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
551	<p>CHECK 218, 220 AND 223, ALL ROWS:</p> <p>NUMBER OF CHILDREN BORN IN 2003 OR LATER LIVING WITH THE RESPONDENT</p> <p>ONE OR MORE <input type="checkbox"/> NONE <input type="checkbox"/></p> <p>RECORD NAME OF YOUNGEST CHILD LIVING WITH HER (AND CONTINUE WITH 552)</p> <p>_____</p> <p>(NAME)</p>		554
552	The last time (NAME FROM 551) passed stools, what was done to dispose of the stools?	CHILD USED TOILET 01 PUT/RINSED INTO TOILET 02 PUT/RINSED INTO DRAIN OR DITCH 03 THROWN INTO GARBAGE 04 BURIED 05 LEFT IN THE OPEN 06 THROWN INTO RIVER/SEA 07 OTHER _____ 96 (SPECIFY)	
553	<p>CHECK 525(a), ALL COLUMNS:</p> <p>NO CHILD RECEIVED FLUID FROM ORS PACKET/HYDRITE TABLET/PEDIALYTE <input type="checkbox"/></p> <p>ANY CHILD RECEIVED FLUID FROM ORS PACKET/HYDRITE TABLET/PEDIALYTE <input type="checkbox"/></p>		555
554	Have you ever heard of a special product called Oresol or Hydrate or Pedialyte that you can get to treat diarrhea?	YES 1 NO 2	
555	<p>Have you ever heard of Sangkap Pinoy?</p> <p>PROBE: IF "NO", SHOW SANGKAP PINOY SEAL.</p>	YES, HEARD 1 YES, RECOGNIZED SEAL 2 NO 3	557
556	Do you ever consciously try to buy foods with the Sangkap Pinoy label?	YES 1 NO 2	
557	<p>CHECK 218, 220 AND 223, ALL ROWS:</p> <p>NUMBER OF CHILDREN BORN IN 2005 OR LATER LIVING WITH THE RESPONDENT</p> <p>ONE OR MORE <input type="checkbox"/> NONE <input type="checkbox"/></p> <p>RECORD NAME OF YOUNGEST CHILD LIVING WITH HER (AND CONTINUE WITH 558)</p> <p>_____</p> <p>(NAME)</p>		601
558	<p>CHECK 404</p> <p>LAST BIRTH IS SAME AS NAME IN 557 <input type="checkbox"/></p> <p>LAST BIRTH NOT SAME AS NAME IN 557 <input type="checkbox"/></p>		560
559	<p>CHECK 464</p> <p>CODE '1' CIRCLED OR NOT ASKED <input type="checkbox"/></p> <p>CODE '2' CIRCLED <input type="checkbox"/></p>		561B

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP																																																																																																																																																									
560	<p>Now I would like to ask you about liquids or foods (NAME FROM 557) had yesterday during the day or at night.</p> <p>Did (NAME FROM 557) (drink/eat):</p> <p>Plain water? Commercially produced infant formula such as S-26, Promil, Bona, Enfalac? Any baby cereal and baby food such as Cerelac, Gerber?</p> <p>Any (other) porridge or gruel?</p>	<p>YES NO DK</p> <p>PLAIN WATER 1 2 8</p> <p>FORMULA 1 2 8</p> <p>BABY CEREAL 1 2 8</p> <p>OTHER PORRIDGE/ GRUEL 1 2 8</p>																																																																																																																																																										
561	<p>Now I would like to ask you about (other) liquids or foods that (NAME FROM 557)/you may have had yesterday during the day or at night. I am interested in whether your child/you had the item even if it was combined with other foods.</p> <p>Did (NAME FROM 557)/you drink (eat):</p> <p>a) Milk such as canned, powdered, or fresh animal milk?</p> <p>b) Tea or coffee?</p> <p>c) Any other liquids such as 'am', carbonated drinks, soup broth?</p> <p>d) Bread, rice, noodles, or other foods made from grains?</p> <p>e) Instant noodles?</p> <p>f) Pumpkin, carrots, squash or sweet potatoes that are yellow or orange inside?</p> <p>g) White potatoes, white yams, cassava, or any other foods made from roots?</p> <p>h) Any dark green, leafy vegetables, like patchay, saluyot and kangkong?</p> <p>i) Ripe mangoes, papayas, oranges, chesa, sineguelas, jackfruit, or other yellow/red fruits rich in Vitamin A?</p> <p>j) Any other fruits or vegetables, e.g. bananas, apples, green beans, avocados, tomatoes, long beans, sweet peas</p> <p>k) Liver, kidney, heart or other organ meats?</p> <p>l) Any meat, such as beef, pork, lamb, goat, chicken, or duck?</p> <p>m) Eggs?</p> <p>n) Bottled or canned sardines?</p> <p>o) Fresh or dried fish or shellfish?</p> <p>p) Any foods made from beans, mungo, lentils, or nuts such as taho, tokwa, tofu, tausi, etc.?</p> <p>q) Cheese, yogurt or other milk products such as Chamyto, Yakult, etc.?</p> <p>r) Any oil, fats, or butter, or foods made with any of these?</p> <p>s) Any sugary foods such as chocolates, sweets, candies, pastries, cakes, or biscuits?</p> <p>t) Any other solid or semi-solid food?</p>	<table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="3">A. CHILD</th> <th colspan="3">B. MOTHER</th> </tr> <tr> <th>YES</th> <th>NO</th> <th>DK</th> <th>YES</th> <th>NO</th> <th>DK</th> </tr> </thead> <tbody> <tr> <td>a</td> <td>1</td> <td>2</td> <td>8</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>b</td> <td>1</td> <td>2</td> <td>8</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>c</td> <td>1</td> <td>2</td> <td>8</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>d</td> <td>1</td> <td>2</td> <td>8</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>e</td> <td>1</td> <td>2</td> <td>8</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>f</td> <td>1</td> <td>2</td> <td>8</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>g</td> <td>1</td> <td>2</td> <td>8</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>h</td> <td>1</td> <td>2</td> <td>8</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>i</td> <td>1</td> <td>2</td> <td>8</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>j</td> <td>1</td> <td>2</td> <td>8</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>k</td> <td>1</td> <td>2</td> <td>8</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>l</td> <td>1</td> <td>2</td> <td>8</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>m</td> <td>1</td> <td>2</td> <td>8</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>n</td> <td>1</td> <td>2</td> <td>8</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>o</td> <td>1</td> <td>2</td> <td>8</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>p</td> <td>1</td> <td>2</td> <td>8</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>q</td> <td>1</td> <td>2</td> <td>8</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>r</td> <td>1</td> <td>2</td> <td>8</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>s</td> <td>1</td> <td>2</td> <td>8</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>t</td> <td>1</td> <td>2</td> <td>8</td> <td>1</td> <td>2</td> <td>8</td> </tr> </tbody> </table>		A. CHILD			B. MOTHER			YES	NO	DK	YES	NO	DK	a	1	2	8	1	2	8	b	1	2	8	1	2	8	c	1	2	8	1	2	8	d	1	2	8	1	2	8	e	1	2	8	1	2	8	f	1	2	8	1	2	8	g	1	2	8	1	2	8	h	1	2	8	1	2	8	i	1	2	8	1	2	8	j	1	2	8	1	2	8	k	1	2	8	1	2	8	l	1	2	8	1	2	8	m	1	2	8	1	2	8	n	1	2	8	1	2	8	o	1	2	8	1	2	8	p	1	2	8	1	2	8	q	1	2	8	1	2	8	r	1	2	8	1	2	8	s	1	2	8	1	2	8	t	1	2	8	1	2	8	
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562	<p>CHECK 560 (LAST 2 CATEGORIES: BABY CEREAL OR OTHER PORRIDGE/GRUEL) AND 561A (CATEGORIES d THROUGH t FOR CHILD):</p> <p>AT LEAST ONE "YES" <input type="checkbox"/></p> <p>NOT A SINGLE "YES" <input type="checkbox"/> → 601</p>																																																																																																																																																											
563	<p>How many times did (NAME FROM 557) eat solid, semisolid, or soft foods yesterday during the day or at night?</p> <p>IF 7 OR MORE TIMES, RECORD '7'.</p>	<p>NUMBER OF TIMES <input type="checkbox"/></p> <p>DONT KNOW 8</p>																																																																																																																																																										

SECTION 6. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	Are you currently married or living together with a man as if married?	YES, CURRENTLY MARRIED 1 YES, CURRENTLY LIVING WITH A MAN 2 NO, NOT IN UNION 3	→ 604
602	Have you ever been married or lived together with a man as if married?	YES, FORMERLY MARRIED 1 YES, FORMERLY LIVED WITH A MAN 2 NO 3	→ 609
603	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED 1 DIVORCED/ANNULLED 2 SEPARATED 3	→ 608
604	Is your husband/partner living with you now or is he staying elsewhere?	LIVING WITH HER 1 STAYING ELSEWHERE 2	
605	RECORD THE HUSBAND'S/PARTNER'S NAME AND LINE NUMBER FROM THE HOUSEHOLD QUESTIONNAIRE. IF HE IS NOT LISTED IN THE HOUSEHOLD, RECORD '00'.	NAME _____ LINE NO. <input type="text"/> <input type="text"/>	
606	Have you been married or lived with a man only once or more than once?	ONLY ONCE 1 MORE THAN ONCE 2	
607	CHECK 606: MARRIED/ LIVED WITH A MAN <input type="checkbox"/> ONLY ONCE In what month and year did you start living with your husband/partner? MARRIED/ LIVED WITH A MAN <input type="checkbox"/> MORE THAN ONCE Now I would like to ask about when you started living with your first husband/partner. In what month and year was that?	MONTH <input type="text"/> <input type="text"/> DONT KNOW MONTH 98 YEAR <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> DONT KNOW YEAR 9998	→ 609
608	How old were you when you first started living with him?	AGE <input type="text"/> <input type="text"/>	
609	CHECK FOR THE PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY.		
610	Now I need to ask you some questions about sexual activity in order to gain a better understanding of some important life issues. How old were you when you had sexual intercourse for the very first time?	NEVER HAD SEXUAL INTERCOURSE 00 AGE IN YEARS <input type="text"/> <input type="text"/> FIRST TIME WHEN STARTED LIVING WITH (FIRST) HUSBAND/PARTNER 95	→ 613 → 613
611	CHECK 107: CURRENT AGE <input type="checkbox"/> 15-24 CURRENT AGE <input type="checkbox"/> 25-49		→ 624
612	Do you intend to wait until you get married to have sexual intercourse for the first time?	YES 1 NO 2 DONT KNOW/UNSURE 8	→ 624
613	CHECK 107: CURRENT AGE <input type="checkbox"/> 15-24 CURRENT AGE <input type="checkbox"/> 25-49		→ 618
614	The <u>first</u> time you had sexual intercourse, was a condom used?	YES 1 NO 2 DONT KNOW/DONT REMEMBER ... 8	
615	How old was the person you first had sexual intercourse with?	AGE OF PARTNER <input type="text"/> <input type="text"/> DONT KNOW 98	→ 618
616	Was this person older than you, younger than you, or about the same age as you?	OLDER 1 YOUNGER 2 ABOUT THE SAME AGE 3 DONT KNOW/DONT REMEMBER ... 8	→ 618

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
617	Would you say this person was ten or more years older than you or less than ten years older than you?	TEN OR MORE YEARS OLDER 1 LESS THAN TEN YEARS OLDER ... 2 OLDER, UNSURE HOW MUCH 3	
618	When was the <u>last</u> time you had sexual intercourse? IF LESS THAN 12 MONTHS, ANSWER MUST BE RECORDED IN DAYS, WEEKS OR MONTHS. IF 12 MONTHS (ONE YEAR) OR MORE, ANSWER MUST BE RECORDED IN YEARS.	DAYS AGO 1 <input type="text"/> <input type="text"/> WEEKS AGO 2 <input type="text"/> <input type="text"/> MONTHS AGO 3 <input type="text"/> <input type="text"/> YEARS AGO 4 <input type="text"/> <input type="text"/>	→ 623
619	The last time you had sexual intercourse with this person, was a condom used?	YES 1 NO 2	→ 621
620	Did you use a condom everytime you had sexual intercourse with this person in the last 12 months?	YES 1 NO 2	
621	What was your relationship to this person with whom you had sexual intercourse? IF BOYFRIEND: Were you living together as if married? IF YES, CIRCLE '2'. IF NO, CIRCLE '3'.	HUSBAND 1 LIVE-IN PARTNER 2 BOYFRIEND NOT LIVING WITH RESPONDENT 3 CASUAL ACQUAINTANCE..... 4 PROSTITUTE 5 OTHER 6 (SPECIFY)	→ 623
622	For how long (have you had/did you have) a sexual relationship with this person? IF ONLY HAD SEXUAL RELATIONS WITH THIS PERSON ONCE, RECORD '01' DAYS.	DAYS 1 <input type="text"/> <input type="text"/> MONTHS 2 <input type="text"/> <input type="text"/> YEARS 3 <input type="text"/> <input type="text"/>	
623	In total, with how many different people have you had sexual intercourse in your lifetime? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NO. OF PARTNERS IS GREATER THAN 95, WRITE '95.'	NUMBER OF PARTNERS IN LIFETIME <input type="text"/> <input type="text"/> DONT KNOW 98	
624	Do you know of a place where a person can get condoms?	YES 1 NO 2	→ 701
625	Where is that? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER OR CLINIC IS PUBLIC OR PRIVATE, WRITE THE NAME OF THE PLACE. _____ _____ _____ (NAME OF PLACE(S))	PUBLIC SECTOR GOVT. HOSPITAL A RHU/UHC B BHS C BSPO/BHW D OTHER PUBLIC E (SPECIFY) PRIVATE SECTOR PRIVATE HOSPITAL/CLINIC F PHARMACY G PRIVATE DOCTOR H PRIVATE NURSE/MIDWIFE I NGO J INDUSTRY-BASED CLINIC K OTHER PRIVATE L (SPECIFY) OTHERS PUERICULTURE CENTER M STORE N CHURCH O FRIENDS/RELATIVES P OTHER X (SPECIFY)	
626	If you wanted to, could you yourself get a condom?	YES 1 NO 2 DONT KNOW/UNSURE 8	

SECTION 7. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	CHECK 310/310A: NEITHER STERILIZED OR NOT ASKED <input type="checkbox"/> HE OR SHE STERILIZED <input type="checkbox"/>		713
702	CHECK 233: NOT PREGNANT OR UNSURE <input type="checkbox"/> PREGNANT <input type="checkbox"/> Now I have some questions about the future. Would you like to have (a/another) child, or would you prefer not to have any (more) children? Now I have some questions about the future. After the child you are expecting now, would you like to have another child, or would you prefer not to have any more children?	HAVE (A/ANOTHER) CHILD 1 NO MORE/NONE 2 SAYS SHE CAN'T GET PREGNANT... 3 UNDECIDED/DON'T KNOW AND PREGNANT 4 UNDECIDED/DON'T KNOW AND NOT PREGNANT OR UNSURE 5	→ 704 → 713 → 709 → 708
703	CHECK 233: NOT PREGNANT OR UNSURE <input type="checkbox"/> PREGNANT <input type="checkbox"/> How long would you like to wait from now before the birth of (a/another) child? After the birth of the child you are expecting now, how long would you like to wait before the birth of another child? IF IN MONTHS, RECORD IN MO. IF TWO YEARS, PROBE FOR EXACT NO. OF MONTHS IF WITH FRACTION OF YEAR, CONVERT TO MONTHS AND RECORD IN MONTHS.	MONTHS 1 <input type="text"/> YEARS 2 <input type="text"/> SOON/NOW 993 SAYS SHE CAN'T GET PREGNANT 994 AFTER MARRIAGE 995 OTHER _____ 996 (SPECIFY) DONT KNOW 998	→ 708 → 713 → 708
704	CHECK 233: NOT PREGNANT OR UNSURE <input type="checkbox"/> PREGNANT <input type="checkbox"/>		709
705	CHECK 309: USING A CONTRACEPTIVE METHOD? NOT ASKED <input type="checkbox"/> NOT CURRENTLY USING <input type="checkbox"/> CURRENTLY USING <input type="checkbox"/>		713
706	CHECK 703: NOT ASKED <input type="checkbox"/> 24 OR MORE MONTHS OR 02 OR MORE YEARS <input type="checkbox"/> 00-23 MONTHS OR 00-01 YEAR <input type="checkbox"/>		709

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
707	<p>CHECK 702:</p> <p>WANTS TO HAVE A/ANOTHER CHILD <input type="checkbox"/></p> <p>↓</p> <p>You have said that you do not want (a/another) child soon, but you are not using any method to delay pregnancy.</p> <p>Can you tell me why you are not using a method?</p> <p>Any other reason?</p> <p>WANTS NO MORE/NONE <input type="checkbox"/></p> <p>↓</p> <p>You have said that you do not want any (more) children, but you are not using any method to avoid pregnancy.</p> <p>Can you tell me why you are not using a method?</p> <p>Any other reason?</p> <p>RECORD ALL REASONS MENTIONED.</p>	<p>NOT MARRIED..... A</p> <p>FERTILITY-RELATED REASONS</p> <p>NOT HAVING SEX B</p> <p>INFREQUENT SEX C</p> <p>MENOPAUSAL/HYSTERECTOMY . D</p> <p>SUBFECUND/INFECUND E</p> <p>POSTPARTUM AMENORRHEIC ... F</p> <p>BREASTFEEDING G</p> <p>FATALISTIC H</p> <p>OPPOSITION TO USE</p> <p>RESPONDENT OPPOSED I</p> <p>HUSBAND/PARTNER OPPOSED . J</p> <p>OTHERS OPPOSED K</p> <p>RELIGIOUS PROHIBITION L</p> <p>LACK OF KNOWLEDGE</p> <p>KNOWS NO METHOD M</p> <p>KNOWS NO SOURCE N</p> <p>METHOD-RELATED REASONS</p> <p>HEALTH CONCERNS O</p> <p>FEAR OF SIDE EFFECTS P</p> <p>LACK OF ACCESS/TOO FAR Q</p> <p>COSTS TOO MUCH R</p> <p>INCONVENIENT TO USE S</p> <p>INTERFERES WITH BODY'S NORMAL PROCESSES T</p> <p>OTHER _____ X (SPECIFY)</p> <p>DONT KNOW Z</p>	
708	<p>CHECK 309: USING A CONTRACEPTIVE METHOD?</p> <p>NOT ASKED <input type="checkbox"/></p> <p>↓</p> <p>NO, NOT CURRENTLY USING <input type="checkbox"/></p> <p>↓</p> <p>YES, CURRENTLY USING <input type="checkbox"/></p>		→ 713
709	<p>Do you think you will use a contraceptive method to delay or avoid pregnancy at any time in the future?</p>	<p>YES 1</p> <p>NO 2</p> <p>DONT KNOW 8</p>	→ 711 → 713
710	<p>Which contraceptive method would you prefer to use?</p>	<p>FEMALE STERILIZATION 01</p> <p>MALE STERILIZATION 02</p> <p>PILL 03</p> <p>IUD 04</p> <p>INJECTABLE 05</p> <p>IMPLANTS 06</p> <p>PATCH 07</p> <p>CONDOM 08</p> <p>FEMALE CONDOM 09</p> <p>DIAPHRAGM 10</p> <p>FOAM/JELLY/CREAM 11</p> <p>MUCUS/BILLINGS/OVULATION 12</p> <p>BASAL BODY TEMPERATURE 13</p> <p>SYMPTOTHERMAL 14</p> <p>STANDARD DAYS METHOD 15</p> <p>LAM 16</p> <p>CALENDAR/RHYTHM/PERIODIC ABSTINENCE 17</p> <p>WITHDRAWAL 18</p> <p>OTHER METHOD _____ 96 (SPECIFY)</p> <p>UNSURE 98</p>	→ 713

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
717	With whom? Anyone else? RECORD ALL PERSONS MENTIONED. DO NOT READ OUT RESPONSES.	HUSBAND/PARTNER A MOTHER B FATHER C SISTER(S) D BROTHER(S) E DAUGHTER F SON G MOTHER-IN-LAW H FRIENDS/NEIGHBORS/OFFICEMATES I OTHER X (SPECIFY)	
718	In the last 12 months, have you encouraged your friends, neighbors, relatives or other persons to use family planning?	YES 1 NO 2	→ 720
719	Who did you encourage? Anyone else? RECORD ALL PERSONS MENTIONED. DO NOT READ OUT RESPONSES.	HUSBAND/PARTNER A MOTHER B FATHER C SISTER(S) D BROTHER(S) E DAUGHTER F SON G MOTHER-IN-LAW H FRIENDS/NEIGHBORS/OFFICEMATES I OTHER X (SPECIFY)	
720	CHECK 601: YES, CURRENTLY MARRIED <input type="checkbox"/> YES, LIVING WITH A MAN <input type="checkbox"/> NO, NOT IN UNION <input type="checkbox"/>		→ 801
721	CHECK 310/310A: CODE B, H, OR R (VASECTOMY, CONDOM OR WITHDRAWAL) CIRCLED <input type="checkbox"/> NO CODE CIRCLED <input type="checkbox"/> OTHER CODES <input type="checkbox"/>		→ 723 → 725
722	Does your husband/partner know that you are using a method of family planning?	YES 1 NO 2 DONT KNOW 8	→ 724
723	Would you say that using contraception is mainly your decision, mainly your husband's/partner's decision, or did you both decide together?	MAINLY RESPONDENT 1 MAINLY HUSBAND/PARTNER 2 JOINT DECISION 3 OTHER 6 (SPECIFY)	
724	CHECK 310/310A: NEITHER STERILIZED <input type="checkbox"/> HE OR SHE STERILIZED <input type="checkbox"/>		→ 801
725	Does your husband/partner want the same number of children that you want, or does he want more or fewer than you want?	SAME NUMBER 1 MORE CHILDREN 2 FEWER CHILDREN 3 DONT KNOW 8	

SECTION 8. HUSBAND'S BACKGROUND AND WOMAN'S WORK

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801	CHECK 601 AND 602: CURRENTLY MARRIED/ LIVING WITH A MAN <input type="checkbox"/> ↓ FORMERLY MARRIED/ LIVED WITH A MAN <input type="checkbox"/> NEVER MARRIED AND NEVER LIVED WITH A MAN <input type="checkbox"/>		803 806
802	How old was your husband/partner on his last birthday?	AGE IN COMPLETED YEARS <input type="text"/>	
803	Did your (last) husband/partner ever attend school?	YES 1 NO 2	805
804	What is the highest grade/year he completed?	<input type="text"/> (SPECIFY)	
805	CHECK 801: CURRENTLY MARRIED/ LIVING WITH A MAN <input type="checkbox"/> ↓ What is your husband's/ partner's occupation? That is, what kind of work does he mainly do? FORMERLY MARRIED/LIVED WITH A MAN <input type="checkbox"/> ↓ What was your (last) husband's/ partner's occupation? That is, what kind of work did he mainly do?	<input type="text"/> <input type="text"/> <input type="text"/>	
806	Aside from your own housework, have you done any work in the last seven days?	YES 1 NO 2	810
807	As you know, some women take up jobs for which they are paid in cash or kind. Others sell things, grow vegetables, raise animals, have a small business or work on the family farm/business. In the last seven days, have you done any of these things or any other work?	YES 1 NO 2	810
808	Although you did not work in the last seven days, do you have any job or business from which you were absent for leave, illness, vacation, maternity leave or any other such reason?	YES 1 NO 2	810
809	Have you done any work in the last 12 months?	YES 1 NO 2	818
810	What is your occupation, that is, what kind of work do you mainly do?	<input type="text"/> <input type="text"/> <input type="text"/>	
811	CHECK 810: WORKS IN AGRICULTURE (FARMING, FISHING, RAISING ANIMALS, HUNTING) <input type="checkbox"/> ↓ DOES NOT WORK IN AGRICULTURE <input type="checkbox"/>		813
812	Do you work mainly on your own land or on family land, or do you work on land that you rent from someone else, or do you work on someone else's land?	OWN LAND 1 FAMILY LAND 2 RENTED LAND 3 SOMEONE ELSE'S LAND 4	814

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
823	Who usually makes decisions about health care for yourself: you, your husband/partner, you and your husband/partner jointly, or someone else?	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> RESPONDENT = 1 HUSBAND/PARTNER = 2 RESPONDENT & HUSBAND/PARTNER JOINTLY = 3 SOMEONE ELSE = 4 OTHER = 6 </div> 1 2 3 4 6	
824	Who usually makes decisions about making major household purchases?	1 2 3 4 6	
825	Who usually makes decisions about making purchases for daily household needs?	1 2 3 4 6	
826	Who usually makes decisions about visits to your family or relatives?	1 2 3 4 6	
827	PRESENCE OF OTHERS AT THIS POINT (PRESENT AND LISTENING, PRESENT BUT NOT LISTENING, OR NOT PRESENT)	PRES./ PRES./ NOT LISTEN. LISTEN. LISTEN. CHILDREN < 10 . 1 2 3 HUSBAND 1 2 3 OTHER MALES . 1 2 3 OTHER FEMALES 1 2 3	
828	Sometimes a husband is annoyed or angered by things that his wife does. In your opinion, is a husband justified in hitting or beating his wife in the following situations:	YES NO DK GOES OUT 1 2 8 NEGL. CHILDREN ... 1 2 8 ARGUES 1 2 8 REFUSES SEX 1 2 8 BURNS FOOD 1 2 8	

SECTION 9. HIV/AIDS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
901	Now I would like to talk about something else. Have you ever heard of an illness called AIDS?	YES 1 NO 2	→ 1001
902	Can people reduce their chance of getting the AIDS virus by having just one uninfected sex partner who has no other sex partners?	YES 1 NO 2 DONT KNOW 8	
903	Can people get the AIDS virus from mosquito bites?	YES 1 NO 2 DONT KNOW 8	
904	Can people reduce their chance of getting the AIDS virus by using a condom every time they have sex?	YES 1 NO 2 DONT KNOW 8	
905	Can people get the AIDS virus by sharing food with a person who has AIDS?	YES 1 NO 2 DONT KNOW 8	
906	Can people reduce their chance of getting the AIDS virus by not having sexual intercourse at all?	YES 1 NO 2 DONT KNOW 8	
907	Can people get the AIDS virus by hugging or shaking hands with a person who is infected?	YES 1 NO 2 DONT KNOW 8	
908	Is it possible for a healthy-looking person to have the AIDS virus?	YES 1 NO 2 DONT KNOW 8	
909	Have you ever been tested to see if you have the AIDS virus?	YES 1 NO 2	→ 914
910	When was the last time you were tested?	LESS THAN 12 MONTHS AGO 1 12 - 23 MONTHS AGO 2 2 OR MORE YEARS AGO 3	
911	The last time you had the test, did you yourself ask for the test, was it offered to you and you accepted, or was it required?	ASKED FOR THE TEST 1 OFFERED AND ACCEPTED 2 REQUIRED 3	
912	Did you get the results of the test?	YES 1 NO 2	
913	Where was the test done? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER, VCT CENTER, OR CLINIC IS PUBLIC OR PRIVATE, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL 11 OTHER PUBLIC 16 (SPECIFY) PRIVATE SECTOR PRIVATE HOSPITAL OR CLINIC ... 21 PRIVATE LABORATORY 22 OTHER PRIVATE 26 (SPECIFY) OTHER 96 (SPECIFY)	→ 1001

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
914	Do you know of a place where people can go to get tested for the AIDS virus?	YES 1 NO 2	→ 1001
915	Where is that? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER, VCT CENTER, OR CLINIC IS PUBLIC OR PRIVATE, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL A RURAL HEALTH UNIT (RHU)/ URBAN HEALTH CENTER B BARANGAY HEALTH STATION C BARANGAY SUPPLY/SERVICE POINT OFFICER/BHW D OTHER PUBLIC E (SPECIFY) PRIVATE SECTOR PRIVATE HOSPITAL OR CLINIC F PHARMACY G PRIVATE DOCTOR H PRIVATE NURSE/MIDWIFE I NGO J INDUSTRY-BASED CLINIC K OTHER PRIVATE L (SPECIFY) OTHERS PUERICULTURE CENTER M STORE N CHURCH O FRIENDS/RELATIVES P OTHER X (SPECIFY)	



SECTION 10. OTHER HEALTH ISSUES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP																		
1001	Have you ever had the following symptoms: A cough for 2 weeks or longer? A fever for 2 weeks or longer? Chest pain or back pain? Coughing up blood? Sweating at night?	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">YES</th> <th style="text-align: center;">NO</th> </tr> </thead> <tbody> <tr> <td>COUGH FOR 2+ WEEKS</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>FEVER FOR 2+ WEEKS</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>CHEST/BACK PAIN</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>BLOOD IN SPUTUM</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>NIGHT SWEAT</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> </tbody> </table>		YES	NO	COUGH FOR 2+ WEEKS	1	2	FEVER FOR 2+ WEEKS	1	2	CHEST/BACK PAIN	1	2	BLOOD IN SPUTUM	1	2	NIGHT SWEAT	1	2	
	YES	NO																			
COUGH FOR 2+ WEEKS	1	2																			
FEVER FOR 2+ WEEKS	1	2																			
CHEST/BACK PAIN	1	2																			
BLOOD IN SPUTUM	1	2																			
NIGHT SWEAT	1	2																			
1002	CHECK 1001: AT LEAST ONE <input type="checkbox"/> "YES" ↓ NOT A SINGLE <input type="checkbox"/> "YES" (ALL "NO") →		1005																		
1003	Did you seek consultation or treatment for the symptoms?	YES 1 NO 2	→ 1005																		
1004	Why didn't you seek treatment for the symptoms?	SYMPTOMS HARMLESS 1 COST 2 DISTANCE 3 EMBARASSED 4 SELF MEDICATION 5 OTHER 6																			
1005	Have you ever heard of an illness called tuberculosis or TB?	YES 1 NO 2	→ 1012																		
1006	What signs and symptoms would make you think that someone might have tuberculosis? PROBE: Anything else? RECORD ALL MENTIONED.	COUGHING A COUGHING WITH SPUTUM B COUGHING FOR SEVERAL WEEKS C FEVER D BLOOD IN SPUTUM E LOSS OF APPETITE F NIGHT/SWEATING G PAIN IN CHEST OR BACK H TIREDNESS / FATIGUE I WEIGHT LOSS J OTHER _____ X (SPECIFY) DONT KNOW Z																			
1007	What do you think is the cause of TB? PROBE: Anything else? RECORD ALL MENTIONED.	MICROBES/GERMS/BACTERIA A INHERITED B LIFESTYLE C SMOKING D ALCOHOL DRINKING E FATIGUE F MALNUTRITION G UNHYGEINIC PRACTICES H POLLUTION I OTHER _____ X (SPECIFY) DONT KNOW Z																			
1008	How does TB spread from one person to another? PROBE: Anything else? RECORD ALL MENTIONED.	THROUGH THE AIR WHEN COUGHING OR SNEEZING A THROUGH SHARING UTENSILS B THROUGH TOUCHING A PERSON WITH TB C THROUGH SHARING FOOD D THROUGH SEXUAL CONTACT E THROUGH MOSQUITO BITES F THROUGH SALIVA G OTHER _____ X (SPECIFY) DONT KNOW Z																			

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1009	Can tuberculosis be cured?	YES 1 NO 2 DONT KNOW 8	
1010	Would you be willing to work with someone who has been previously treated for tuberculosis?	YES 1 NO 2 DONT KNOW/NOT SURE/ DEPENDS 8	
1011	If a member of your family got tuberculosis, would you want it to remain a secret?	YES 1 NO 2 DONT KNOW/NOT SURE/ DEPENDS 8	
1012	Do you currently smoke cigarettes?	YES 1 NO 2	→ 1014
1013	In the last 24 hours, how many cigarettes did you smoke?	CIGARETTES <input type="text"/>	
1014	Do you currently smoke or use any other type of tobacco?	YES 1 NO 2	→ 1016
1015	What (other) type of tobacco do you currently smoke or use? RECORD ALL MENTIONED.	PIPE A CHEWING TOBACCO B SNUFF C CIGAR D OTHER X (SPECIFY)	
1016	Many different factors can prevent women from getting medical advice or treatment for themselves. When you are sick and want to get medical advice or treatment, is each of the following a big problem or not?		
	Getting permission to go?	PERMISSION TO GO ... 1	2
	Getting money needed for treatment?	GETTING MONEY 1	2
	The distance to the health facility?	DISTANCE 1	2
	Having to take transport?	TAKING TRANSPORT... 1	2
	Not wanting to go alone?	GO ALONE 1	2
	Concern that there may not be a female health provider?	NO FEMALE PROV. ... 1	2
	Concern that there may not be any health provider?	NO PROVIDER 1	2
	Concern that there may be no drugs available?	NO DRUGS 1	2
1017	CHECK HOUSEHOLD QUESTIONNAIRE Q14 AND COMPARE NAME AND LINE NUMBER OF RESPONDENT IN COVER PAGE WOMAN NOT SELECTED FOR WS MODULE <input type="checkbox"/> SELECTED FOR WS MODULE <input type="checkbox"/>		→ WS MODULE
1018	RECORD THE TIME.	HOUR <input type="text"/> MINUTES <input type="text"/>	

VITA

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2013-2014	Master of Arts in Demography College of Population Studies, Chulalongkorn University
2005-2009	Bachelor of Arts magna cum laude, Philippine Studies College of Arts and Letters, University of the Philippines
2007-2008	Economics (Exchange Studentship) College of Economics, Nihon University, Tokyo, Japan
2007-2008	Japanese Language and Japanese Studies Program International Division, Nihon University, Tokyo, Japan

SELECTED PUBLICATION

Vicerra, P.M.M. (2015). Impact of abortion to Philippine fertility: A health and demographic perspective. *The Public Health Journal*.

Vicerra, P.M.M. (2014). Adherence to preventive illness control among Filipino women through an autonomy perspective. *Proceedings of the 18th International Sociological Association World Congress of Sociology*.

Vicerra, P.M.M. and Javier, J. (2013). Tabi-tabi po: Situating the narrative of supernatural in the context of the Philippine community development. *Manusya*: 16(2): 1-12.

Vicerra, P.M.M., and Javier, J. (2013). National decisions on the terms of the local: The Hambilanons' tenacity on their land. *Proceedings of the 2012 Conference on Anthropology and Sustainability in Asia*. PRESDA Foundation.

AFFILIATION

Society for the Psychology of Women: American Psychology Association

Asian Population Association

International Union for the Scientific Study of the Population

The Honor Society of Phi Kappa Phi

Philippine Population Association

