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DETERMINANTS OF THE DURATION OF BIRTH INTERVALS IN TANZANIA: REGIONAL CONTRASTS AND TEMPORAL TRENDS

DHS Qualitative Research Studies 19

December 2013

This publication was produced for review by the United States Agency for International Development. It was prepared by P. Stanley Yoder of ICF International, Joe L.P. Lugalla of the Department of Anthropology, University of New Hampshire, and Richard F. Sambaiga of the Department of Sociology and Anthropology, University of Dar es Salaam.



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**Determinants of the Duration of Birth Intervals in Tanzania:
Regional Contrasts and Temporal Trends**

P. Stanley Yoder
Joe L.P. Lugalla
Richard F. Sambaiga

ICF International
Calverton, Maryland, USA

September 2013

Corresponding author: P. Stanley Yoder. International Health and Development, ICF International, 11785 Beltsville Drive, Calverton, Maryland 20705, USA; Phone: 301-572-0200; Fax: 301-572-0999; Email: stan.yoder@icfi.com

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LIST OF ACRONYMS

AIDS:	Acquired immune deficiency syndrome
AMREF:	African Medical Research Foundation
ANC:	Antenatal care
CESTRE:	Center for Strategic Research and Development
CPR:	Contraceptive prevalence rate
DHS:	Demographic and Health Surveys
FGD:	Focus group discussions
FP:	Family planning
GDP:	Gross domestic product
EGPAF:	Elizabeth Glaser Pediatric AIDS Foundation
HIV:	Human immunodeficiency virus
IMCI:	Integrated management of childhood illness
IUD:	Intrauterine device
NBS:	National Bureau of Statistics
NIMR:	National Institute for Medical Research
RIPS:	Regional integrated project support
RCHS:	Reproductive and Child Health Section
SPA:	Service provision assessment
SSA:	Sub-Saharan Africa
TFR:	Total fertility rate
TZS:	Tanzanian shillings
UMATI:	Family Planning Organization of Tanzania
UNICEF:	United Nations International Children's Fund
USAID:	United States Agency for International Development
USD:	United States dollar
WHO:	World Health Organization

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EXECUTIVE SUMMARY

Introduction and background

The duration of birth intervals has received attention in demography and public health research because of its implication for fertility and for maternal and child health. This study examines the duration of birth intervals in two regions of Tanzania and seeks to explain the origin of the differences between the regions by considering survey data as well as interviews with individual women and groups of men.

Our starting point is the striking regional trends in the length of birth intervals as observed in the five Tanzanian surveys of the Demographic and Health Surveys Program that have been conducted in the country from 1991 to 2010. In particular this study focuses mainly on the populations of Western and Southern Zones, where the DHS also showed contrasts in the contraceptive prevalence rate (CPR) for modern methods over time. In the Western Zone, the CPR was 2% in 1991, and then 7% for the next three surveys, eventually rising to 13% in the 2010 survey. In the Southern Zone, the CPR was 4% in 1991 and rose substantially in each survey until it reached 36% in 2010. These two zones present stark contrasts in both the duration of birth intervals and in the use of contraception.

Objectives

The aim of this study is to explain the puzzle of differences in birth intervals between the two zones—how and why the length of birth intervals in the Western Zone of Tanzania has remained constant while the length of birth intervals has increased substantially in the Southern Zone. As the study began, we noted the importance of explaining another related puzzle: why the CPR has risen substantially over time in the Southern Zone (from 4% in 1991 to 36% in 2010) while in the Western Zone, the increase has been significantly slower (from 2% in 1991 to 13% in 2010)?

Methodology

Data collection and analysis involves both quantitative and qualitative methods. The quantitative part of the study drew on data from five separate DHS surveys conducted in Tanzania. These data set the stage for an examination of the general questions of how and why the duration of birth intervals were so similar in Western and Southern Zones more than 20 years ago, and what changes have occurred since then to produce a lengthening in one Zone but not in the other. The more specific research questions pursued include the following:

- What social factors are associated with longer birth intervals in Tanzania?
- How do the values of variables with immediate effects on delay of pregnancy, such as breastfeeding, insusceptibility, and use of contraception, vary by region?
- How do the values of variables with indirect effects on delay of pregnancy differ by region?
- How have the variables with immediate and with indirect effects on delay of pregnancy varied over time in the regions examined?
- What demographic variables are associated with higher postpartum use of contraception?

The qualitative methods of data collection involved individual interviews with women who had two or more children, interviews with health care providers, and discussions with men. These methods

allowed the study to (1) identify elements within the lives of women that they themselves connected to actions taken to delay pregnancy, and to (2) obtain accounts of their experiences in finding a husband and raising a family. The questions that the study sought to answer in this manner included the following:

- What actions do women take to postpone their next pregnancy?
- How and what do women think about birth spacing and birth intervals?
- What birth intervals do women consider as ideal for themselves?
- In what circumstances are women likely to use contraceptive services?
- What methods of contraception are preferred by women?
- What has been the history of the use of contraception among individual women?
- How have the ideas of women about birth spacing changed over time?
- How have health center personnel promoted the use of contraception?
- What do husbands have to say about the use of contraception?
- What do men say about accompanying their wives to ANC clinics?

The interviews with women were guided by a two-page conversation guide organized by themes and sub-headings to remind the interviewer of the topics to cover. The guides for interviews with health care providers and for the group discussions with men were similar in structure though they addressed somewhat different topics.

Two approaches were used to recruit women for in-depth interviews. Our main approach was to identify women who had come for services in health facilities. In each region, two facilities were identified as main sites for data collection: one serving mainly rural populations and the other urban. Women attending antenatal care (ANC) clinics were contacted to check on their availability and suitability for being interviewed. Our target sample was 20 women from each facility. Two health care providers responsible for providing modern methods of contraception in each facility were also interviewed to learn about the services they offer, their experiences in providing contraception, and their opinions about their clients' preferred methods. Finally, a focus group discussion (FGD) with men was held in the village nearest each facility. The discussions were conducted to hear community ideals about finding a wife, having children, providing for a family, and using contraception. In all, the research team interviewed 91 women, along with eight health care providers, and held four FGDs with men. The FGDs involved 34 men ages 30-70 years old.

Data collection, data processing, and analysis

Both the Western Zone and the Southern Zone are divided administratively into three regions. We chose to collect data in the one region of each most typical in terms of social and economic factors: Shinyanga region in Western Zone and Lindi region in Southern Zone. Five experienced female research assistants with college degrees in sociology, demography, or community development were trained for three days in Dar es Salaam by Stan Yoder of ICF, Joe Lugalla of CESTRE, and Richard Sambaiga of the Department of Sociology and Anthropology at the University of Dar-es-Salaam to conduct the interviews with female respondents. During the fieldwork, the five female research assistants conducted the

interviews with women, while Mr. Sambaiga interviewed the health service providers and led the group discussions with men.

The conversations and group discussions were held in Swahili and recorded with permission of the respondents. Qualitative data generated from women and men were subjected to rigorous qualitative data processing and analysis. After multiple reading of the texts, one to two page summaries of key points were prepared for each interview and shared among the research team. Among the topics reported for each interview with women were the following: how the woman found a husband, her age at marriage, her economic activity, her education, the number of children she had and desired to have, the length of her birth intervals, her use of contraception, and her discussion of contraception with her husband. The analysis of DHS data consisted mainly of the preparation of descriptive statistics and tables related to the variables expected to have an immediate or an indirect effect on the duration of birth intervals.

The findings

Regional contrasts/differences and its implication on birth intervals

The study's main findings reveal that beyond mainstream understanding of social determinants of reproductive practices, a closer analysis of women's and men's narratives shows that various aspects embedded in the social, cultural, and economic contexts of Lindi and Shinyanga account for the temporal disparity in birth intervals between the two regions. In the contextualization of regional differences in birth intervals, several aspects stand out, including variations in household economic organization; marriage practices and living arrangements; the value of children; cultural beliefs and values attached to postpartum abstinence; and male involvement in FP.

Contextual issues were placed into three groups: **1) the social and economic organization; 2) marriage patterns and gender relations; and 3) reproductive health interventions.** The study then explains how these issues affect and influence the use of contraception and the consequential variation in birth intervals between Lindi and Shinyanga.

Social and economic organization

Differences in the systems of social economic organization have implications for how people perceive reproductive health in the two regions. On one hand, prolonged economic difficulties in Lindi, or *maisha magumu* (hard times), leading to difficulties in obtaining basic needs, have triggered desires for both child spacing and fewer children. Coupled with other factors the economic difficulties paved a way for positive responses towards family planning campaigns, which in turn increased the use of contraceptives. On the other hand, the arrival of hard times in Shinyanga, especially in the rural areas, has consolidated the desire for many children as a source of manpower to boost farming and pastoralist activities as well as domestic activities in the extended families. In such contexts, family planning campaigns tend to compete with the demands of household economics.

Marriage patterns and gender relations

Marriage practices and the living arrangements of the couples in Lindi leave more space for women to control their own reproductive activities, including the timing of pregnancies, in comparison to Shinyanga. In Shinyanga, men/husbands tend to wield more social and economic power than women/wives. While this is also the case in Lindi, the disparity between men and women has been reduced in Lindi. Women's narratives on the history of their marital life show that divorce and remarriage are more common in Lindi than in Shinyanga.

Equally important, the dynamics in the relationship between husbands and wives (gender relations) offer a window for explaining differences in birth intervals in Lindi and Shinyanga. As noted in the findings, more women discuss FP matters with their husbands in Lindi than in Shinyanga. Many men in Lindi see and make sense of the importance of FP as consistent with their concrete circumstances or lived experiences as underlined earlier. For instance, with limited opportunities for earning a living, women are increasingly expected to participate in production activities apart from reproduction, in contrast to their role in the past. However, the situation is different for their counterparts in Shinyanga who have difficulties discussing FP issues with their spouses because of the large inequality in the ability to make decisions that affect family life. Whereas some men in Lindi are increasingly accompanying their spouses to the health facility for ANC services (a practice that allows men to be exposed to modern methods of FP and contraception), the same practice is highly discouraged by most men in Shinyanga region.

The cultural and structural differences are essential but insufficient in accounting for systematic differences in birth intervals in the two regions. They must be combined with, first of all, the individual women's active and creative engagements with multiple social expectations, and second, their own aspirations in regards to the timing of pregnancies and subsequent birth intervals. Yet these two factors are frequently not in harmony. Concrete life situations such as the death of a husband or break up of one's marriage leading into a new marriage, illness, and the need for care and support from men and their own children are also equally important considerations. We also emphasize that experiences of women in Shinyanga and Lindi in relation to birth intervals do not conform to coherent, linear, normative, and rigid pre-established patterns.

Reproductive health interventions

The paucity of data and information makes it impossible to provide detailed documentation on the interventions related to reproductive health that have been implemented in the two regions. However, information derived from the Ministry of Health and Social Welfare itself confirms that Lindi and other southern regions have enjoyed a variety of health related interventions for some time. Only recently has Shinyanga begun receiving more support from a variety of donors. Taking into consideration that these various interventions involve components of awareness-raising in communities about the importance of reproductive health, Lindi may have experienced a relative advantage, which in turn has played a role in influencing the temporal trends that we now see in terms of higher contraceptive uptake and longer birth intervals in Lindi than in Shinyanga.

Conclusion and recommendations

The findings of the present study add to our knowledge of the intricacies of reproductive intentions, choices, and actions. In particular, we have shown the importance of understanding underlying factors and how they shape reproductive choices beyond mainstream understanding of social determinants of family planning. The main determinants of the use of FP are not found in individual knowledge and attitudes toward FP, but in the social, cultural, and economic interactions of everyday life. Since these determinants vary and differ between the two regions, the understanding, interpretation, and meaning of these interventions in people's lives will certainly vary and differ.

In that respect, the study calls for closer examination of the conditions that influence the importance of family planning to a particular individual, group, community, and society.

Equally important are methodological considerations, especially the need for understanding issues in family planning beyond positivistic realms in order to grasp the complexities inherent in people's reproductive practices. Specifically for Lindi and Shinyanga regions, it is necessary to have an

ethnographically grounded understanding of the many open empirical questions about temporal variations in birth intervals within and across the Zones and regions.

With respect to interventions towards promoting or/and sustaining best practices in family planning, we recommend the following based on the study findings:

- Revise the expectations of FP programs that expect to have a similar major effect everywhere.
- Train FP providers to widen their views of what is relevant for the promotion of FP to include the social context of women
- Shape the programs to be socially and culturally contextualized.
- Expand the program to directly involve men in the process of ANC and other reproductive health services and in decisions about birth spacing.
- Find ways to do community outreach so that the health care providers better understand how couples talk about birth spacing.
- Develop policies to create a social environment that enables women to become active participants of their own improvement, empowerment, and emancipation.
- Find ways to discourage the practices that facilitate early marriages and restrict girls from being enrolled in schools.
- Create an environment that increases the options for women and girls to discuss their ideas about reproductive health with others and to take action themselves.
- Call upon elders to embrace birth spacing and promote family planning in their communities.
- Persuade religious leaders to play a role similar to elders in promoting family planning.
- As a long-term policy strategy, begin integrating education on family planning, sexuality, and gender equality into the core curriculum in both ordinary and advanced secondary education.

Birth intervals, whether shorter or longer, are a result of active social practices enacted by social actors who belong to webs of social relationships. The findings of this study have far reaching implications both in terms of further research and interventions focusing on reproductive intentions. The fact that longer birth intervals are so closely related to the dynamics between husbands and wives, as well as the wider social and economic context, implies that family planning programs must take a two-pronged approach to be effective: improve knowledge and access to contraceptive methods on the one hand, but also offer assistance to move toward more social equality between men and women on the other.

CHAPTER 1: INTRODUCTION

The duration of birth intervals has received attention in demography and public health research because of its implications for fertility and because longer birth intervals have been shown to provide health benefits for both a mother and her children. The length of time between births is usually expressed in months, and the indicator used is the median duration in months. The Western and Southern Zones of Tanzania present stark contrasts in both the duration of birth intervals and in the use of contraception. This study examines the duration of birth intervals in two regions representing these zones and seeks to explain the origin of the differences between the regions by considering survey data as well as interviews with individual women and groups of men.

Five DHS surveys have been conducted in Tanzania from 1991 to 2010. The 2010 DHS found a median birth interval of 33.9 months at a national level, but the duration of birth intervals has varied greatly over time and among administrative zones. The median length of birth intervals in 1991 varied from 30 to 36 months in the eight administrative zones of the country. In the Lake and Western Zones, the median length of birth intervals in 1991 was 30 months, and it remained 30 months in both Zones in the 2010 DHS. In Eastern and Southern Zones, however, the birth intervals were found to be 35 and 36 months respectively in 1991, and 44 and 47 months in 2010. The study will focus mainly on the populations of Western and Southern Zones.

The DHS surveys also showed contrasts in the contraceptive prevalence rate (CPR) of modern methods over time in the Western and Southern Zones. In Western Zone, the CPR was 2% in 1991, then around 7% for the next three surveys, before rising to 13% in the survey of 2010. In Southern Zone, on the other hand, the CPR was 4% in 1991 and rose substantially with each survey until it reached 36% in 2010.

1.1 Objectives

This study was designed to determine how and why the length of birth intervals in the Western Zone of Tanzania has remained constant while the length of birth intervals has increased substantially in the Southern Zone. The study also sought evidence to explain how and why the median value of birth intervals was 30 months in Western Zone in 1991 while it was 36 months in Southern Zone. In other words, the report briefly comments on the origins of the original contrast in the length of birth intervals while focusing primarily on the factors involved in the increase in duration in Southern Zone while the Western Zone showed no change.

The data collected and consulted for the study include the five DHS data sets available, accounts of the provision of contraceptive services by government entities and by various donors, and interviews with mothers, with men, and with contraceptive service providers. Interviews with mothers focused on the actions they take to postpone pregnancy, their knowledge and motivations for using contraception, and their ideas and experiences with birth spacing. Group discussions with men addressed the process of finding a wife and having a family, the use of contraception, and their ideas about birth spacing. Individual interviews with family planning providers focused on the contraceptive methods they offer, their experiences in providing contraception, and their opinions about the methods preferred by their clients.

Other ways to ask the main questions of the study are to ask what is so different about the population and practices of Southern Zone that their median birth interval would be 14-17 months longer than for the populations in the Western Zone. Do these contrasts stem from differences in ecological factors, in social factors, in postpartum insusceptibility (from either amenorrhea or abstinence), in access

to contraception, in postpartum use of family planning, in fertility preferences of women, or in underlying factors such as wealth and education? Have the fertility preferences and ideas about birth spacing and birth intervals among women changed much over time? The study was designed with these questions in mind.

It seems certain that part of the explanation for how and why the duration of birth intervals was extended in one region and not in another would be the use of modern methods of family planning. As mentioned above, rates of contraceptive use in Western and Southern Zones differ dramatically from 1991 to 2010. Current use of modern contraception in regions of longer birth intervals was about three times as frequent as in the regions of shorter intervals. This contrast creates yet another puzzle to solve. What factors led to the rapid rise of CPR in Southern Zone while CPR rose very slowly in Western Zone? A satisfactory explanation of the differences in the duration of birth intervals requires that we also explain the contrast in CPR.

These are critical issues to address to understand both how social change occurred in Tanzania and how those changes affected the health of women and children. This study was designed to explain how the duration of birth intervals became much longer in one region than in another in Tanzania. Once that process is understood, government and private agencies working in the domains of fertility and reproductive health will be able to develop more effective strategies to promote longer birth intervals, including the use of family planning methods, for other regions of the country.

CHAPTER 2: BACKGROUND

2.1 Importance of duration of birth intervals

Statistical analyses of large sample data sets have established that the duration of birth intervals affects the health and nutritional status of mothers and children (Rutstein 2005; 2008; Dewey and Cohen 2007). A study of the effects of birth spacing on infant and child mortality as well as nutrition using 17 DHS data sets was first published by Shea Rutstein (2005). Rutstein updated and expanded his earlier analyses on the same topic in 2008 with the use of data sets from 52 countries.

A meeting of technical experts on birth spacing at the World Health Organization (WHO) in 2005 recommended that women avoid getting pregnant until at least 24 months after a birth for their own health and that of their babies (WHO 2006). Analyses showed that if women waited 24 months before getting pregnant, as recommended by WHO, child mortality would decrease by 13%. If they waited 36 months, child mortality would decrease by 25% (Rutstein 2008). In his most recent review of these data, Rutstein notes that “The interval between births has been shown in numerous studies to substantially affect the mortality, birth size and weight, and nutritional status of children, and the risk of pregnancy complications for mothers” (Rutstein 2011: xiii).

In the DHS surveys, birth interval data are derived from the birth histories in the women’s core questionnaire. In survey data from Sub-Saharan Africa, the median duration from 35 DHS surveys from 1987 to 2008 was 33 months, with lows of 27 in the Comoros (1996) and 28 in Sudan (1990), and highs of 40 in South Africa (1998) and 39 in Lesotho (2004) (Rutstein 2011).

Given these findings, it seems useful to compare data on the duration of birth intervals within as well as between countries. The patterns of maternal and child health, particularly around pregnancy and delivery, may be somewhat different in regions with a median length of less than 33 months than in those with a median duration of 45 months. Such a contrast will also have implications for the effective promotion of modern contraceptive methods. Therefore, as an outcome of the interaction of many factors, the median duration of birth intervals can serve as a sign to look at certain factors that are immediate and proximal determinants of the length of birth intervals.

2.2 Determinants of the duration of birth intervals: published studies

The literature relevant to understanding the determinants of the length of birth intervals falls most directly under the rubric of studies of the fertility transition, birth spacing, “unmet need,” fertility preferences and intentions, and the use of postpartum contraception. A number of demographers have written about the concept of “natural fertility” and the fertility transition in Sub-Saharan Africa (SSA), seeking to show how countries in SSA are alike or different from European ones in shifting to lower fertility rates. Others have done research on fertility intentions or fertility preferences, invoking a model of rational thinking and planning to space births and/or limit family size. Moultrie and Timaeus have recently argued that we should pay less attention to birth spacing and limits to family size, and more attention to ways that women find to delay a next pregnancy (Moultrie 2005; Timaeus and Moultrie 2008). And in the past few years, USAID and other donors have promoted the use of longer term methods in the postpartum period.

This literature touches on a number of issues pertinent to this study: some related to individual actions and/or motivations, some indirectly related by statistical association. What aspects of individual choice and actions are likely to affect the duration of birth intervals? Should we expect fertility intentions as measured in surveys to be related to birth intervals? What is the relationship between the duration of

birth intervals and the use of modern contraception? What assumptions should we make about motivations to space a birth, to limit family size, or to delay the next pregnancy? And in terms of statistical associations, which variables are most likely to show strong association with the duration of birth intervals in a DHS data set?

In her review of approaches to theories of natural fertility and the fertility transition, Jennifer Johnson-Hanks uses DHS data from 18 countries in Africa to show that the fertility decline in African societies does not resemble what occurred in Europe in terms of either parity or birth intervals (Johnson-Hanks 2007). She explains that the fundamental uncertainties about the future in African societies have a direct effect on the way that women delay or accept pregnancy. Given that uncertainty, women do not assume that they are able to choose the timing of their pregnancies, though many may well try. She is sharply critical of the uses of actions shown in statistics as “revealed preference” or as evidence of individual intentions. We should not, therefore, view the lengthening of birth intervals—a statistical finding—as evidence of individual motivation among women.

The most comprehensive study of birth spacing available is the study mentioned earlier by Shea Rutstein, who compiled DHS data on actual and preferred birth intervals in multiple surveys for 46 countries to show current data and temporal trends in the length of birth intervals (Rutstein 2011). Rutstein found that on average, the length of birth intervals increased by 3.1 months between the first survey available and the most recent one. He also found that for 86% of women, their most recent birth interval was more than three months longer or shorter than their stated preferred interval. In SSA the length of preferred birth intervals as stated in surveys was 38.9 months while the actual interval was 32.7 months. In the DHS surveys in Tanzania from 1991 to 2004, the preferred interval was 5.9 months greater than the actual birth interval (Rutstein 2011).

In his review of birth spacing in east and southern Africa, Tom Moultrie notes that birth spacing in sub-Saharan Africa had long been maintained by prolonged breastfeeding and long periods of postpartum abstinence (Moultrie 2005). The literature in the 1990s on fertility in African countries showed that social and cultural changes in many African societies had led to reduced duration of both breastfeeding and abstinence, which could lead to shorter birth intervals. Some suggested that modern contraception might replace those practices to continue longer birth intervals (Kirk and Pillet 1998). The data on contraceptive use and birth intervals in South Africa show a close correlation between the two, but this association cannot be shown in the other African countries examined.

Victor Agadjanian has pointed out that “reproductive intentions and contraceptive behavior are commonly viewed together as two aspects of the multifaceted process of fertility change” (Agadjanian 2006:617). Reproductive intentions, or fertility preferences, are established by asking women (and men) about their “ideal family size” in a survey context. In some contexts, a decrease in the number of children preferred is thought to increase demand for contraception as women seek to limit their family size. Some hold that if properly obtained, statements about fertility preferences should be closely associated with the use of contraception.

Agadjanian seeks to cast doubt on this association by showing that in Maputo, where the social and economic context is changing rapidly, women’s ideas about fertility preferences are often ambiguous and temporary. Individuals do not easily fall into the categories of those who want to stop and those who want to space their births. Rather, they just want to wait awhile before becoming pregnant again. In open-ended conversations, they expressed conflicted opinions about wanting another child. In such a context, the use of contraception becomes experimental and easily shifted. He implies that we should not expect women to hold clear and firm ideas about how many children they want, and then expect they would space them to satisfy that preference. Ilene Speizer reached similar conclusions in her research in Honduras and the Philippines (Speizer 2007).

Ian Timaeus and Tom Moultrie reach similar conclusions about birth spacing and birth intervals in their analyses of data from eastern and southern African countries, but their arguments are far more coherent and compelling (Timaeus and Moultrie 2008). They first note that the fertility literature has usually presented the motives for birth control as fitting into two mutually exclusive categories: limiting family size and spacing births. They argue for a third category, namely delaying pregnancy. They show that the postponement of pregnancy is a phenomenon separate and different from birth spacing, conceptually distinct and with different implications for birth intervals. They criticize the assumption made by many who assume that if women limit family size or space their births in a certain way, that limitation shows intention. Timaeus and Moultrie point out that demands of family life could just as well limit family size or space births. Thus the social interactions of daily life may trump intentions, particularly ones stated in a survey.

The authors also observed that many women who use contraception may do so simply because they do not want to become pregnant at that time, a sentiment that may not be linked to a desire to have another child or not. They also mention other motivations for using contraception. In short, we must be cautious about imputing motives for the use or non-use of contraception at any point in time.

2.3 Data sources for Tanzania

Data from five DHS surveys are available to inform this study: surveys in 1991, 1996, 1999, 2004 and 2010. The analyses examined three types of variables for possible association with the length of birth intervals. One, several variables linked to desires and preferences of women that are related to numbers of children and preferences for the length of birth intervals. Two, variables linked directed to the duration of birth intervals such as postpartum amenorrhea, breastfeeding, postpartum abstinence, the frequency of sexual relations, and the use of contraception. Three, variables that have a proximal effect on intervals such as women's age, marital status, education, parity, age at first birth, urban/rural residence, etc. Methods included the comparison of the values of these variables by region, and regressions to assess the relative strength of certain associations.

Another way to consider variables that may affect the duration of birth intervals is to focus on agency. Factors such as breastfeeding and the postpartum use of contraception reflect actions that a mother can take alone, although she may well discuss the action with others. Postpartum amenorrhea is not amenable to direct outside influences but may be affected by breastfeeding and diet. Postpartum abstinence and the frequency of sexual relations are usually actions that involve collaboration between a wife and a husband. The impact of the desire of a woman to achieve a certain length between births, or to reach a specific total number of children, may well affect the average length of birth intervals of a woman, but the impact will be indirect and of unknown strength.

Finally, factors in the circumstances or situation of a woman—more proximate determinants—that affect her fertility and the duration of birth intervals include age, marital status, parity, and age at first birth for those related to bearing children, and urban/rural residence, education, and religion, as social factors that indirectly affect outcomes.

DHS surveys generate information about the preferred length for birth intervals. The question asked in 2010 was: “How long would you like to wait before the birth of a (another) child?” DHS surveys also asked about the number of children that women want in all, or the ideal family size. Women without children were asked how many children they would like to have if they could choose that number. Women with one or more children were asked how many children they had wanted to have in all before they began having children. Therefore, for each of these five surveys, we can examine the median duration of the desired birth interval and then compare that period of time with actual birth intervals

reported by respondents. Similarly, we can derive a median number of children desired by women and compare that figure with the total fertility rate.

2.4 Regional economic and demographic factors

Lindi region is located in the southeastern part of Tanzania. It has a population of 864,652 people but its population growth rate declined from 1.4 between 1998 and 2002 to 0.9 between 2002 and 2012 (NBS 2013). The region has the lowest population density in the country: 13 persons per kilometer square (NBS 2013). It is also among the regions with the lowest household size (3.8) in the country (the lowest being 3.7 in Mtwara region next door). The major ethnic groups in Lindi region are the Mwera, Ngindo, Makonde, and Matumbi. However, the Mwera and Ngindo constitute the majority among the four main ethnic groups. Jando and Unyago initiation rituals conducted for girls and for boys as they enter puberty are among the popular traditional rituals in Lindi, especially for the Mwera.

Subsistence agriculture is the major economic activity carried out in the region, and it employs about 86% of the total population. Other activities include fishing (1.1%), business operations (8%); office work (2.5%), livestock (0.1%), and plant operation and assembly (0.25%) (Lindi Regional Commissioner's office 2011). Whereas the main food crops include cassava, sorghum, and sweet potatoes, the major cash crops for the region are coconut, cashew nut, simsim, and pulses. Although Lindi region has vast land that can be used for agricultural production, it is one of the most food insecure regions in Tanzania (Lindi Regional Commissioner's office 2011).

In contrast, Shinyanga region is located south of Lake Victoria at 20 to 160 kilometers from the shorelines, forming part of what used to be known as the Sukuma land. The region makes part of the Lake Zone in the Western part of Tanzania. The region's population trends mirror general dynamics in the country, which include: the general decline in the population growth rate (from 3.3 in 1988-2002 to 2.1 in 2002-2012); increasing urbanization; agriculture as the main economic activity; and declining infant mortality rates and under-5 mortality rates. Compared with the densely populated regions in Tanzania, Shinyanga could be categorized as one of the moderately populated regions. According to the 2002 Census, the region's average population density was 55.2 persons per square kilometer. This increased to 81 persons per square kilometer in 2012 (NBS 2013). The average household size is 5.9 compared to national average of 4.8 people. The major ethnic group is the Wasukuma. Other ethnic groups are Wanyamwezi and Wasumbwa. There are also several other ethnic groups in the region, such as the Wanyiramba, Wataturu, and Wahadzabe who settled in rural Shinyanga.

Agriculture dominates the livelihood and economic performance of Shinyanga region. The sector contributes about 75% to the regional economy and employs about 90 percent of the working population in the region. Agriculture is dominated by peasant farming. Main cash crops are cotton and tobacco while the main food crops are maize, sorghum, paddy rice, sweet potatoes, millet, and cassava. The region has the largest planted area of maize and second largest for paddy rice and sorghum in Tanzania. Besides farming, livestock keeping is also a major activity in the region. Cattle, goats, and sheep are the major domesticated animals. The dominant ethnic group, Wasukuma, is both agriculturist and livestock keeping. The majority of the population in Shinyanga region depends largely on grains for their staple food. Grains account for about 70 percent of starch foods available for consumption. Root crops, mainly cassava and sweet potatoes, take the remaining 30 percent. Rice is also sold as a cash crop in different proportions in the region. Cotton is the major cash crop, supplemented by tobacco.

The values of variables most often thought to be related to the duration of birth intervals were examined in each survey to document both regional differences and trends over time. These variables included those with an immediate effect on delaying pregnancy, such as exclusive breast-feeding, postpartum abstinence, postpartum amenorrhea, and use of contraception. The variables with more

indirect effects, or proximate ones, included education, urban/rural residence, religion, being in a monogamous union, and reported desire for many children.

Plate 1. Map of Tanzania



CHAPTER 3: METHODOLOGY

The methods of data collection and analysis involved what are usually called quantitative and qualitative methods. That is, the study drew on data from five separate DHS surveys conducted in Tanzania from 1991 to 2010, and on interviews with individual women and with groups of men to discuss their experiences in finding a spouse, having children and delaying pregnancy. Survey data were used to examine regional differences in the duration of birth intervals in two zones and then two regions in Tanzania: in Western and Southern Zones, and within those zones, Shinyanga and Lindi regions.

3.1 Research questions

The survey data allowed us to examine the variations by zone and by region in the duration of birth intervals more than 20 years ago, with special attention to Western and Southern zones, and what changes have occurred since then to produce a lengthening in one zone but not the other. The more specific research questions pursued include the following:

- What social factors are associated with longer birth intervals in Tanzania?
- How do the values of variables with immediate effect on delay of pregnancy such as breastfeeding, insusceptibility, and use of contraception vary by region?
- How do the values of variables with indirect effect on delay of pregnancy differ by region?
- How have the variables with immediate and with indirect effect on delay of pregnancy varied over time in the regions examined?
- What demographic variables are associated with higher postpartum use of contraception?

The study began with analyses of DHS survey data that compared the values of key variables in the two zones and two regions of interest that allowed us to draw a portrait of the women of reproductive age in these four areas. We were seeking to explain what might be different in the lives of women—in their knowledge and practices—in the Southern Zone that would explain how and why their median birth interval would be 14-17 months longer than for the populations in Western Zone.

The research team also consulted data from the 2006 Tanzania Service Provision Assessment (SPA) survey that visited more than 10% of health care facilities in Mainland Tanzania (NBS and Macro International 2007). The sample included all zonal regional, and district hospitals, plus a sample of all the remaining facilities, public and private. The SPA asked each health care facility about the availability of modern contraceptive methods in the two zones. The percentage of facilities that offered any modern method of contraception in 2006 was 81% in Western Zone and 80% in Southern Zone. The contraceptive methods most commonly offered in health facilities are progestin-only injectable (95%), contraceptive pills (95%), and the male condom (94%). IUDs (46%), and implants (44%) are less often available. In fact, among the facilities that offer temporary contraceptive methods, only 4% offered implants on the day of the survey visit, and 2% offered IUDs.

The individual interviews with women who had two or more children, as well as interviews with health care providers and discussions with men, allowed the study to identify elements within the lives of women that they themselves connected to actions taken to delay pregnancy, and to obtain accounts of their experiences in finding a husband and raising a family. The questions that the study sought to answer in this manner included:

- What actions do women take to postpone their next pregnancy?
- How and what do women think about birth spacing and birth intervals?
- What birth intervals do women consider as ideal for themselves?
- In what circumstances are women likely to use contraceptive services?
- What methods of contraception are preferred by women?
- What has been the history of the use of contraception among individual women?
- How have women's ideas about birth spacing changed over time?
- How have health center personnel promoted the use of contraception?
- What do husbands have to say about the use of contraception?
- What do men say about accompanying their wives to ANC clinics?

The interviews with women were guided by a two-page conversation guide organized by themes and sub-headings to remind the interviewer of the topics to cover (see Appendix B). The guides for interviews with health care providers and for the group discussions with men were similar in structure though they addressed somewhat different topics (see Appendices C & D).

3.2 Sample selection

The individual interviews and group discussions were conducted in December 2012 and January 2013 in Shinyanga region of Western Zone and Lindi region of Southern Zone. Two approaches were used to recruit women for in-depth interviews. Our main approach was to identify women who had come for health services in health facilities. In each region, two facilities were identified as main sites for data collection: one serving mainly rural populations and one serving mostly urban populations. Women attending antenatal care clinics (ANC) were contacted to check on their availability and suitability for being interviewed. Our target sample was 20 women from each facility: 10 with two or three children, and 10 with four or more children. We were seeking a range in the number of children, and hence the number of birth intervals, in the respondents interviewed. A one-page screening form was used to identify 10 women who satisfied the two criteria in each facility (See Appendix A).

However, it was not easy to get women qualifying for the study only through the health facilities within a short period of time. This required that we revise our approach to enable recruiting the women through communities served by the aforementioned health facilities. Finding pregnant women with four children was nearly impossible in Lindi region. The research team enlisted the assistance of local leaders and health care providers to identify women with four or more children to be interviewed. This approach entailed going to households with women who fulfilled the criteria for participating in the study. These women were interviewed to learn about their experiences in finding a husband, starting a family, earning a living, and planning a pregnancy.

Two health care providers responsible for providing modern methods of contraception in each facility were also interviewed to learn about the contraceptive methods they offer, their experiences in providing contraception, and their opinions about the methods preferred by their clients (Appendix C). Finally, one focus group discussion with men was held in the village nearest each facility (Appendix D).

The discussions were conducted to hear men's ideals about finding a wife, having children, providing for a family, and using contraception.

In all, the research team was seeking to interview 80 women and 8 health care providers, as well as conduct four focus group discussions with men. The team ended up interviewing 91 women in all, along with 8 health care providers, and conducted four focus group discussions (FGDs) with men. A total of 34 men age 30-70 participated in the group discussions.

3.3 Data collection, data processing, and analysis

Five research assistants with college degrees in sociology, demography, or community development were trained for three days in Dar es Salaam by Stan Yoder of ICF, Joe Lugalla of CESTRE, and Richard Sambaiga of Department of Sociology and Anthropology at the University of Dar-es-Salaam to conduct the interviews with female respondents. They were all women experienced in the techniques and requirements of both survey questionnaires and open-ended interviewing. The training of these research assistants was held in facilities that belong to the Tanzanian government's Institute of Education. Training topics included the principles of qualitative research, the study objectives and methods, the use of a conversation guide to solicit accounts of individual experiences, and the recruitment of participants. The group spent some time in adapting the Swahili versions of the conversation guides to fit more closely with women's concepts and concerns. Participants demonstrated their interviewing skills through role plays, including the use of informed consent statements and use of a tape recorder.

During the fieldwork, the five female research assistants conducted the interviews with women, while Mr. Sambaiga interviewed the health service providers and led the group discussions with men. The conversations and group discussions were held in Swahili and recorded with permission of the respondents. The recordings were transcribed and typed in Swahili, and then translated into English and typed in Microsoft Word for analysis. The ethical approval for this study was obtained from the National Institute for Medical Research (NIMR) as well as from the University of Dar-es-Salaam and ICF International in Maryland.

After multiple reading of the texts, one to two page summaries of key points were prepared from each interview and shared among the research team. Among the topics reported for each interview with women were the following: how she found a husband, her age at marriage, her economic activity, her education, the number of children she had and the number desired, the length of each of her birth intervals, her use of contraception, and her discussion of contraception with her husband. Also included was her response to a question about how she planned to achieve her desired total number of children.

The analysis of DHS data consisted mostly of the preparation of descriptive statistics and tables related to the variables expected to have an immediate or an indirect effect on the duration of birth intervals. Details are provided in the section that reports on the findings in chapter 4.

CHAPTER 4: TRENDS OVER TIME FROM DHS DATA SETS

This chapter takes note of the differences by zone and by region and the changes over time in variables often found to be associated with the duration of birth intervals in Tanzania in the five DHS surveys. Tables are used to show changes in the values for a series of demographic and other variables that are often linked to the use of contraception and the length of birth intervals. Table 1 below shows the median duration of birth intervals in the DHS surveys for each of the seven administrative zones of Tanzania. In each of the DHS surveys, eligible women were those with a live birth in the past five years. The duration of the birth interval was the time between their most recent birth and the one preceding. The table shows where the median duration of birth intervals has remained constant and where it has changed in the 20-year period.

Table 1. Median length of birth intervals in months by zone in DHS surveys

Zone	Median length of birth intervals				
	1991	1996	1999	2004	2010
Western	30	31	30	31	30
Lake	31	31	30	30	30
Eastern	32	35	41	43	44
Central	33	34	Na	34	34
Northern Highlands	34	34	Na	35	38
Southern Highlands	36	35	Na	35	35
Southern	36	38	39	45	48

The table reveals two temporal patterns in the duration of birth intervals. In pattern one, the median duration over this period of time did not essentially change, a trend found in five of the seven regions. In pattern two, there was a steady increase in the median length of birth intervals over time. Both Eastern and Southern Zones fit this pattern. It should also be noted that the two zones in the west, Lake and Western, have maintained their birth intervals at close to 30 months for 20 years. The other three zones have remained at about 34 months, although the median duration for Northern Zone increased to 38 months in 2010.

Given these patterns in the seven administrative zones, the study chose to focus on Western Zone and Southern Zone, since they offer a maximum contrast. Each zone is divided into three administrative regions: Kigoma, Shinyanga, and Tabora in Western Zone, and Lindi, Mtwara, and Ruvuma in Southern Zone. Shinyanga and Lindi were selected for data collection as the most representative of the zone in which they are located. Most of the tables that follow display data from these four zones and regions.

4.1 Proximate variables

A number of demographic variables are commonly associated with the length of birth intervals, the use of contraception, or both. The first series of tables that follow shows the values for these variables (residence, education, religion, etc.) for the Western and Southern Zones and for the Shinyanga and Lindi regions within those zones. The second series of tables shows the values of variables related to pregnancy and the risk of pregnancy in these same four areas.

Specifically, Table 2 shows the percentage of the population in the four areas that lived in areas classified as urban to show how the proportion of urban inhabitants changed over time in each region. The proportion of the population in urban residence should be considered because some studies have shown that the duration of birth intervals is longer and the use of modern contraception higher in urban than in rural areas. It is possible that some of the fluctuation in the data are due to variations in the sampling frame.

Table 2. Percentage of women age 15-49 that lived in urban areas by DHS survey

Zone/region	1991	1996	1999	2004	2010
Western Zone	12.7	12.2	10.2	15.3	17.5
Southern Zone	19.0	20.3	24.6	21.4	21.3
Shinyanga region	6.6	4.8	5.2	15.4	14.2
Lindi region	15.2	24.8	18.7	20.7	16.8

In Western Zone and Shinyanga region, where one finds shorter birth intervals and low use of contraception, overall urbanization was far lower than in Southern and Lindi regions in 1991, but has increased in those areas over time. At the same time, the rate of urbanization was consistently higher in Southern Zone than in Western from 1991 to 2010, but the overall rate changed little. At present, the rate of urbanization in Shinyanga has increased to nearly the level found in Lindi.

The analysis of relative differences in birth intervals between rural and urban areas within the same region may shed light on whether or not it is the rate of urbanization alone or urbanity as a way of life that has an influence on women’s reproductive intentions and practices. The indicative difference in birth intervals reported by women in Shinyanga urban and rural as discussed in chapter five is case in point. Here, it is arguable that migration to urban areas exposes people to new “modern values” and patterns of life. Such processes are likely to bring people closer to health care services and other social services. In addition, the nature of urban areas themselves, difficulties in life, and the struggle for survival in terms of food, employment, and accommodation, can have powerful effects on how people think about size of their family.

The literature on sub-Saharan African patterns of sexual relations contains considerable discussion and argument about the roles of sexual liaisons and their changing place in the economic and kinship systems of the subgroups in which they occur (Bledsoe, 1980; Caldwell, 1977; Molnos, 1973; Lambo, 1964; Worthman and Whiting, 1987). A number of studies of migration in urban sociology and anthropology show how people’s values and norms change as a result of urbanization. It is believed that urbanization may free people from structures placed upon them when they are under closer, kinship-based control. Although women may be freed from some constraints placed upon them, their economic condition may force them into liaisons—some of which are seen as extensions of the tradition of polygyny—in order to survive poverty or continue their schooling or chosen careers. To what extent both men and women who migrate to urban areas become free of rural, communal, and kinship-based forms of social control remains to be seen. How their new experiences of urban life tend to shape both men and women’s sexual and reproductive health behavior is an open and empirical question. Since rural-urban migration in Tanzania tends to be circular (back and forth to urban and rural areas), it is likely that new norms and values associated with urban areas also diffuse into rural areas, slowly beginning to break down the beliefs and ways of life associated with rural areas.

The next two tables provide different measures of the level of education attained in each of the four areas. The two measures show similar changes over time in all the areas.

Table 3. Percentage of women age 15-49 without education by DHS survey

Zone/region	1991	1996	1999	2004	2010
Western Zone	47.4	37.6	42.2	33.0	29.0
Southern Zone	33.5	24.9	26.7	22.0	15.2
Shinyanga region	51.7	43.2	46.6	31.5	27.6
Lindi region	33.9	24.8	27.2	25.4	29.1

Table 3 shows a clear contrast between the Western Zone and the Southern Zone as well as in the two regions within those zones. In 1991, about 50% of women had no education in Western Zone, while one-third of women in Southern Zone had no education. The proportion of women in the two regions show parallel contrasts to those of Western and Southern Zones. In Western and Southern Zones, as well as Shinyanga region, the proportion of the population with no education declined by 35-50% from 1991 to 2010, while Lindi shows only a small decrease. To the extent that education is associated with longer birth intervals or with the use of contraception, one would expect to see major increases in both variables in Western and Southern Zones.

This finding corroborates a potent argument by Johnson-Hanks (2006) that the association between education and reproductive intentions or practices is not linear but complex due to the diversity and incoherencies in individual women's life courses or trajectories. Some educated women in Tanzania defer having children with their husband until they reach a certain level of social and professional stability, and then they have two or three with short birth intervals. They then have no more. Although such a pattern goes against the association of higher education with longer intervals, it confirms the link between higher education and female control over child-bearing.

Table 4. Percentage of women age 15-49 who could read easily by DHS survey

Zone/region	1991	1996	1999	2004	2010
Western Zone	36.0	44.5	37.7	51.4	54.6
Southern Zone	45.4	53.1	57.1	62.5	67.1
Shinyanga region	30.9	35.7	33.7	52.8	51.4
Lindi region	46.4	59.7	61.6	62.8	49.9

Table 4 shows the same pattern of contrasts among zones and regions, and the same changes over time as found in Table 3, including only a small change over time in Lindi. As with the other measure of education, the smallest change occurred in Lindi region. Southern Zone is notable for showing a gradual increase in the proportion of women who could read easily in each survey.

Table 5 shows the proportion of the population that is of Muslim faith to serve as background for questions about the possible impact that religion may have on the duration of birth intervals or the use of contraception.

Table 5. Percentage of women age 15-49 of Muslim faith by DHS survey

Zones/region	1991	1996	1999	2004	2010
Western Zone	16.4	15.3	15.5	14.6	Na
Southern Zone	62.3	60.4	72.8	63.2	Na
Shinyanga region	4.1	2.4	4.2	5.2	Na
Lindi region	77.5	72.2	85.7	76.6	Na

This study did not make any assumptions about an association between religion and the duration of birth intervals or the use of contraception. The purpose of the table is to show the contrast between areas in the proportion of the population that is of Muslim faith. The question about the religion of respondents was not asked in the 2010 DHS. Lindi stands out as the region where three-fourths of the population is Muslim compared to 4-5% in Shinyanga.

Overall, Western and Southern Zones show a clear contrast in the religious affiliation of the population (data not shown). While just more than half of the respondents in Western Zone said they were Christian, only about one-third reported they were Christian in Southern Zone, with about two-thirds being Muslim. Western Zone has about equal numbers of Catholics and Protestants, while Southern Zone has very few Protestants at all.

In chapter five we discuss with qualitative empirical details the ways in which Islamic values and practices create opportunities for longer birth intervals. Men and women in Lindi, where three-fourths of the population is Muslim, talked about the Islamic teachings on longer periods of breast feeding and post-partum abstinence.

Some studies have suggested that women in polygamous unions have fewer children and longer birth intervals than women in monogamous unions (cf. Garenne and van der Walle 1989; Page and Lesthaeghe 1988; Oheneba-Sakyi and Heaton 1993). In the 1991 DHS survey, the percentage of women in monogamous unions varied from 62% in Shinyanga region to 71% in Southern Zone, with Western Zone and Lindi region both at 66% (data not shown). By the 2010 DHS survey, the percentages of women in monogamous unions remained at around 66% in Western Zone and Shinyanga region, but had increased to 83% in Southern Zone and 84% in Lindi region. A higher proportion of women in polygynous unions in most contexts tends to favor lower fertility and longer birth intervals. This association does not hold in the comparison of Western and Southern Zones.

A look at the difference in regions in each survey, and changes over time, in relation to urbanization, education, religion, and monogamy, do not suggest any simple and linear association with the longer birth intervals found in Southern Zone and Lindi region by 2010. This in no way means that the mentioned contextual factors do not affect the reproductive actions of men and women (see chapter five). Rather, these issues will be developed further as we later consider the quantitative and the qualitative evidence together. For example, our conversations with women in Shinyanga and Lindi showed that women in Lindi divorce their husbands and/or have children outside marriage more easily than do women in Shinyanga.

This next series of tables show the values of variables related to pregnancy and the risk of pregnancy for the sample population of the four areas.

Table 6. Percentage of women age 15-49 who wanted more than six children by DHS survey

Zone/region	1991	1996	1999	2004	2010
Western Zone	38.3	31.5	31.2	30.4	29.3
Southern Zone	25.3	15.9	16.9	12.0	7.6
Shinyanga region	41.0	36.0	31.5	25.3	27.6
Lindi region	28.6	17.0	25.5	17.7	12.4

Table 6 shows the dramatic contrast between the Western and Southern Zones in the proportion of women who report in the DHS surveys that they want more than six children. While that proportion decreased in all four areas, the largest decline by far occurred in Southern Zone: from 25% in 1991 to 8% in 2010. Similarly, Lindi showed a decrease from 29% in 1991 to 12% in 2010. The table suggests that the desired number of children may well be a factor in the duration of birth intervals. When these survey results are triangulated with women’s narratives, it is clear too that women in Lindi are less interested in having many children, while, in Shinyanga, having fewer children is stigmatized by members of the community. Men say, “You are more of man if you have at least 6-10 children.” Women in Shinyanga think along the same lines, gaining respect in their communities and from their parents-in-law by bearing the husband many children.

4.2 Fertility and use of contraception

The rates of total fertility and of contraception are both related to the duration of birth intervals: the total fertility as an outcome measure, and contraception as one of the determining factors. Table 7 shows the total fertility rate (TFR) for the two zones over time as background to facilitate comparison of the two zones.

Table 7. Total fertility rate by each survey for Southern and Western Zones by DHS survey

	1991	1996	1999	2004	2010
Western Zone	7.0	6.6	6.9	7.3	7.1
Southern Zone	6.4	6.6	5.2	5.5	5.1

Although both Western and Southern Zones had the same value in the 1996 DHS, (6.6 children), the TFR has remained roughly the same in all five surveys in Western Zone. In Southern Zone, on the other hand, the TFR dropped to 5.1 from 6.6 in 1996. In the 2010 DHS, the women of Southern Zone were able to have two fewer children on average than did the women of Western Zone. The question is, how were they able to achieve this result? Is the explanation for this result the same as for the lengthening of birth intervals? We return to these questions in the discussion of qualitative findings in the next chapter.

Tables 8 and 9 display two measures of the use of modern contraception in the two zones and two regions over time. Table 8 shows the temporal trends over time in the proportion of women age 15-49 who reported that they had “ever used” contraception.

Table 8. Percentage of women age 15-49 that ever used contraception by DHS survey

Zone/region	1991	1996	1999	2004	2010
Western Zone	6.2	14.5	14.0	21.0	na
Southern Zone	13.0	29.8	38.5	56.0	na
Shinyanga region	5.1	9.3	9.2	17.7	na
Lindi region	18.0	36.2	41.9	57.7	na

The DHS of 2010 did not ask respondents whether they had ever used contraception. While the proportion of women who had ever used increased substantially everywhere, the increase is most dramatic in Southern Zone and Lindi region. Also worth noting is that the level of ever use in Southern Zone was twice that of Western Zone in the first DHS in 1991: 13% versus 6%. With the passage of time, the difference in the two regions only increased. A similar contrast can be seen in the values for Shinyanga and Lindi regions, for Shinyanga went from 5% to 18%, while Lindi shifted from 18% to 58% by 2004.

Table 9 below shows the proportions of women who were currently using a modern contraceptive at the time of each of the five DHS surveys. It should be noted that those who are current users today, or this month, may no longer be using in the next week or the next month. That is, women cannot be categorized as family planning users and non-users unless a certain date has been specified.

Table 9. Percentage of sample population currently using contraception by DHS survey

Zone/region	1991	1996	1999	2004	2010
Western Zone	2.0	7.0	7.0	7.9	12.8
Southern Zone	4.3	13.7	19.0	27.8	35.7
Shinyanga region	1.2	4.0	4.9	7.4	10.5
Lindi region	7.9	15.7	19.4	28.4	37.7

This second measure of contraceptive use (current use) shows even more dramatic differences by region than does “ever use.” Although current use was higher in Southern Zone than in Western Zone in 1991, over time the difference only increased. All areas have responded positively to the promotion of family planning methods, but Southern Zone and Lindi region show rates of current use that are three times that of the other two areas by 2010. Contraception was almost unknown in Shinyanga in 1991, with 1% of women using a method, but current use rose to 11% in 2010.

It is also worth examining the method mix from the DHS surveys over time for temporal trends and regional contrasts. Table 10 shows the percentages of women who were classified as current users of contraception along with the methods they were using. Table 10 provides data at a national level for four surveys, while Tables 10a to 10d show data at the level of the four regions of interest.

Table 10. Percentage of women age 15-49 that currently use various methods of contraception in Tanzania by DHS survey

	1996	1999	2004	2010
Any methods	18.4	25.4	26.4	34.4
Any modern method	13.3	16.9	20.0	27.4
Injectables	4.5	6.3	8.3	10.6
Pills	5.5	5.3	5.9	6.7
Female sterilization	1.9	2.0	2.6	3.5
Condoms	0.8	2.7	2.0	2.3
IUD	0.6	0.4	0.2	0.6
Implants	0.0	0.1	0.5	2.3
Traditional method	5.1	8.5	6.4	7.0

The period from 1996 to 2010 saw a major increase in the use of modern contraceptives in Tanzania: from 13% to 27%, or double the earlier rate. The increase was due mainly to increased use of injectables. Implants were becoming available for the first time between 2004 and 2010. It should be noted that the percentage of long-term methods remains relatively low, but that it did increase from 2.5% in 1991 to 6.4% in 2010. It is safe to assume that the government, through UMATI and various donors, was promoting the use of family planning and was making contraceptives more available from 1999 to 2010.

The comparison of the methods used at various times in various regions may improve our understanding of the use of contraception over time. The next four tables show the method mix for each of the zones and regions over time.

Table 10a. Percentage of women age 15-49 that currently use the more popular methods of contraception in Western Zone by DHS survey

Western	1996	2004	2010
Any modern method	8.5	8.7	14.6
Injectables	3.1	3.7	5.4
Pills	3.1	1.4	2.6
Sterilization (female)	1.8	1.8	3.0
Condoms	0.1	1.2	1.9

Western Zone was not one of the zones in which the use of family planning changed very much, though overall use increased from 9% in 1996 to 15% in 2010. Only injectable and condom usage showed increases.

Table 10b. Percentage of women age 15-49 that currently use the more popular methods of contraception in Southern Zone by DHS survey

Southern	1996	2004	2010
Any modern method	16.1	29.9	39.5
Injectables	4.9	10.1	11.6
Pills	8.2	12.9	16.0
Sterilization (female)	1.9	3.8	5.5
Condoms	1.1	2.6	2.4

Southern Zone shows major increases in the use of family planning. Not only did the overall use jump from 16% to 40%, but the percentage of users of each method also doubled. Injectables increased to 12% from 5% and pills from 8% to 16%.

At the regional level, the region of Shinyanga showed relatively low rates of contraceptive use, but the overall use of modern methods, shown in Table 10c, increased from 5% to 13%.

Table 10c. Percentage of women age 15-49 that currently use the more popular methods of contraception in Shinyanga region by DHS survey

Shinyanga	1996	2004	2010
Any modern method	4.7	7.5	12.5
Injectables	1.6	2.1	5.3
Pills	1.2	1.9	0.9
Sterilization (female)	1.6	1.9	1.9
Condoms	0.0	1.5	1.6

The region of Shinyanga shows changes in two categories: in the overall measure of popular contraceptive methods that increased to 13% from 5%, and in the use of injectables that went from 1.6% in 1996 to 5% in 2010. Condom use also increased from 0% in 1996. The relative popularity of injectables may be linked to the possibility of using an injection as a method of FP without the knowledge of the husband.

Table 10d. Percentage of women age 15-49 that currently use the more popular methods of contraception in Lindi region by DHS survey

Lindi	1996	2004	2010
Any modern method	17.1	25.9	38.5
Injectables	4.3	6.1	7.1
Pills	8.6	18.3	27.3
Sterilization (female)	2.4	3.5	3.7
Condoms	1.4	1.8	1.6

Lindi region shows the same dramatic increase in the use of modern contraceptives as does Southern Zone, but an even larger increase in the use of pills. While overall use began at 17% in 1996 and climbed to 39% by 2010, the use of pills increased even more: from 9% in 1996 to 27% in 2010, a three-fold increase. It may well be that the government or some other agency promoted the use of pills intensely in Lindi region, or at least made them more available, during the period from 1995 to 2010, since the use of pills for the Southern Zone increased to only 16% during this period. It should be noted that while the values of variables may be statistically significant at the level of zones in the DHS surveys, that may not be the case for regional comparisons. Regional comparisons are useful, however, in showing historical trends.

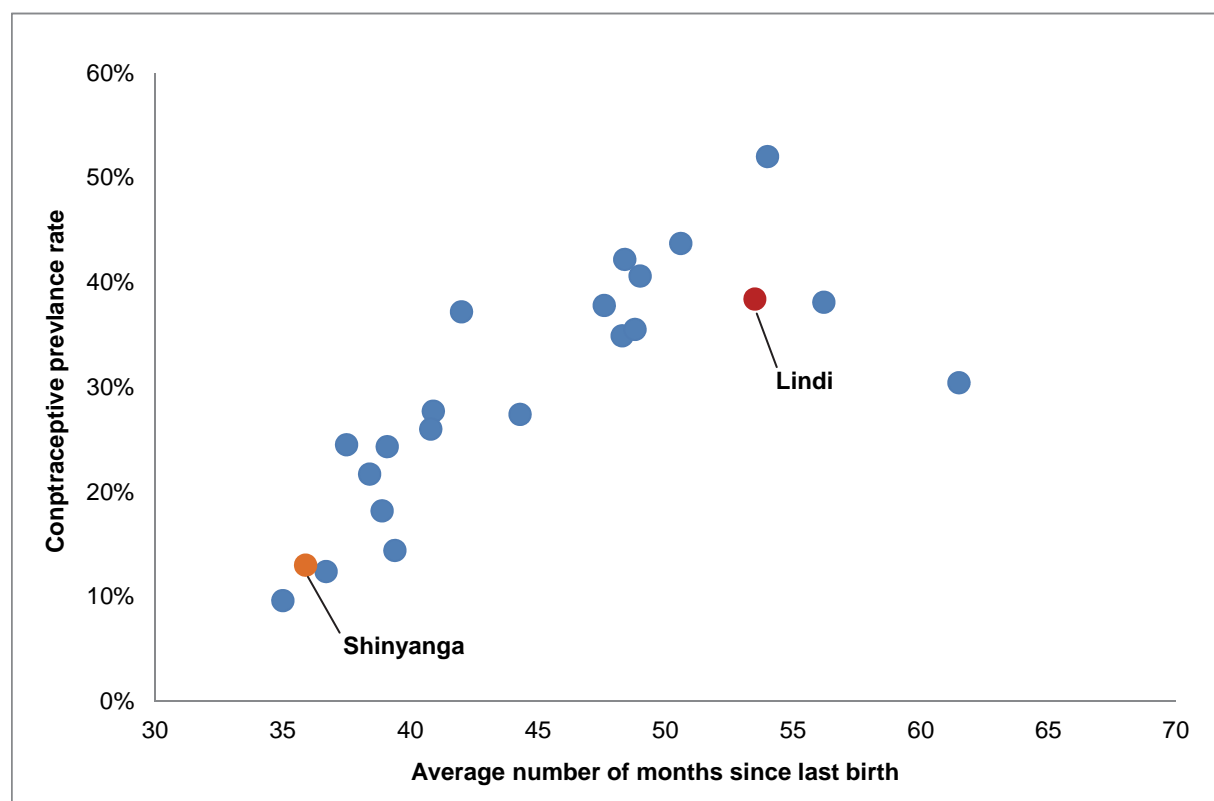
The comparison of contraceptive use by region and over time suggests a close relationship with the duration of birth intervals. One part of the reason that Western Zone, and Shinyanga region within that zone, had relatively short birth intervals in 1991 and 1996, is their relatively low use of modern contraception. When compared with rates in Southern Zone and Lindi region, which showed use rates of 16% and 17% in 1996, Western and Shinyanga areas show far lower rates of contraception in 1996: 9% and 5%.

Finally, evidence of a connection between contraceptive prevalence and the length of birth intervals can be seen in Figure 1. The duration in months shown in the index section is not the median birth interval for the region, but rather, the mean number of months since the last birth. This length of time is likely to be longer than the median length of birth intervals, but it still shows clear regional differences. Shinyanga and Lindi regions are marked in red in the label and on the figure.

The scatter plot of Figure 1 shows the relationship between the contraceptive prevalence rate (CPR) and the time elapsed between the date of the survey and the last birth among married women. Since the CPR is current use, the time elapsed since the last birth was used for each region rather than the median birth interval (past actions). The linear nature of the plotted results shows a fairly strong relationship between the time elapsed since the last birth and the current use of contraception. Shinyanga shows a time since last birth of 36 months, and the two neighboring regions that are part of Western Zone (Tabora and Kigoma) are similar, each with 39 months. Lindi, on the other hand, has a value of 54 months. The two neighboring regions that form part of Southern Zone had values of 51 and 56 months (Ruvuma and Mtwara).

The figure suggests that women in Southern Zone are able to delay their next pregnancy through the use of modern contraception. Thus part of our explanation for the lengthening of birth intervals in Southern Zone involves the use of family planning. Other parts of the explanation involve other variables that are shown in DHS surveys (such as post-partum abstinence and age at first sex/first marriage) as well as elements derived from the narratives of women themselves. We consider post-partum abstinence and age at first sex and age at first marriage in Tables 11 and 12.

Figure 1. Contraceptive prevalence rate by average number of months since last birth by region



4.3 Other variables

The length of post-partum abstinence may affect the duration of birth intervals, so it is critical to take note of the trends over time in abstinence as well as the regional differences. The median length of post-partum abstinence in months has declined nationally in the past 20 years. In 1991 the median length was 6.5 months. It declined in each subsequent survey: to 5.6 in 1996, to 4.4 in 1999, to 3.9 in 2004, and to 3.8 months in the 2010 DHS survey.

The use of contraception in the post-partum period reduces the importance of post-partum abstinence in assuring a proper birth interval. Table 11 shows the contrasts in post-partum abstinence for the two zones and two regions. It seems important to note the contrast between the median length of abstinence in Western and Southern Zones as well as in Shinyanga and Lindi regions in the last two surveys.

Table 11. Median duration of postpartum abstinence in months by DHS survey

	2004	2010
Western Zone	3.6	4.2
Southern Zone	15.3	13.3
Shinyanga region	3.1	5.3
Lindi region	14.3	15.2
National	3.9	3.8

This table explains part of the difference in the duration of birth intervals between Western and Southern Zones. The patterns of resumption of sexual relations after delivery are clearly different in those two zones. Women in Southern Zone in 2004 had a period nearly 12 months longer than those in Western Zone without the risk of pregnancy from their husband because of the practice of abstinence.

We also considered the possibility of contrasts in the age of first sex, first marriage, and first birth in the different zones of Tanzania. Table 12 shows the median age at first sex, first marriage, and first birth for each of the seven zones of the country from the 2010 DHS. No major differences are apparent. It is true that the Southern Zone has the lowest median age at first sex, an entire year less than Western Zone, but they end up with the same median age at first birth. The median age of marriage in Southern Zone is 2.6 years higher than age at first sex, while that figure is only 12 months in Western Zone. In other words, many young women in Southern Zone have a period of about 30 months between the initiation of sexual relations and getting married. For Western Zone, that period is only 12 months. Also noteworthy is the fact that Eastern Zone is the only Zone in which the median “age at first marriage” is higher than the median “age at first birth.”

Table 12. Median age at first sex, at first birth, and at first marriage by zone, 2010 DHS

Zone	Age at first sex	Age at first marriage	Age at first birth
Western	17.1	18.1	19.2
Northern	18.6	19.8	20.3
Central	17.4	18.4	19.6
Southern Highland	18.2	19.0	19.5
Lake	16.9	18.5	19.1
Eastern	17.4	20.0	19.7
Southern	16.1	18.7	19.1

The data for age at first sex, age at first marriage, and age at first birth barely changed at all from 1991. Given that fact, and the very small variations in these variables by region in 2010, we have no reason to expect that changes in temporal trends in these variables had any impact on the duration of birth intervals.

In short, the DHS surveys show that the uses of contraception and post-partum abstinence are both part of the explanation for the contrast in the duration of birth intervals in Shinyanga and Lindi regions. The length of abstinence in the two regions explains part of the original contrast found in the 1991 DHS, while the use of contraception explains more of the increase in duration since 1991. The next chapter considers evidence for these issues from the narratives of women and their lived experiences that show the social context of their reproductive health choices.

CHAPTER 5: DELAYING PREGNANCY IN LINDI AND SHINYANGA

The thrust of this chapter is to examine multiple factors that shape women's reproductive practices in Lindi and Shinyanga regions. Drawing on conversations with women and discussions with men, the analysis focuses on questions of how and why a woman would extend the time between births in particular contexts but pay limited attention to timing in other situations. The questions hint at the fact that apart from individual women's aspirations, desires, and circumstances, women's reproductive intentions and practices are rooted in social and cultural contexts. In that respect, we focus on themes that address the relational and temporal contexts of women's reproductive actions (Emirbayer and Mische 1998). These include, but are not limited to, an individual woman's relationship with a husband/partner and family members; ideas and actions for having children; efforts to time her pregnancies; and involvement of a husband/partner in timing of pregnancies. In terms of presentation, we juxtapose normative or societal ideals against women's lived reproductive experiences. Rather than simply extracting limited quotes, we present vignettes of selected but diverse women's reproductive lives from both rural and urban Shinyanga and Lindi. The chapter ends with a brief discussion that highlights major contrasts in women's lives in the two regions.

5.1 Contextualizing shifts in birth intervals in Lindi region

Findings from focus group discussions (FGDs) with men and in-depth interviews with women from urban and rural Lindi strongly suggest that increased economic or life hardship (*maisha magumu*) is one of the major triggers for longer birth intervals in the region. Common expressions in this respect include that, in the past, livelihood opportunities were plenty (*zamani neema ilikuwepo*), but they have mostly disappeared today (*leo hii neema zimetoweka*). Interviews with health providers in selected health facilities in Lindi urban and rural areas further confirmed that when they consult a health provider seeking a contraceptive, many women express the desire that they want to space (*kupishanisha*) children in order to be able to deal with life hardships (*maisha magumu*). In specific terms, they refer to costs of educating children (*kusomesha*), feeding them (*watakula nini*), and tending to other basic needs. Taking into account the challenges and hardships of child rearing, other women simply say that they need to rest for a while (*kupumzika*).

In the same manner, some participants in the FGDs made their points with reference to the Sukuma (a major ethnic group in Western Tanzania) who are living in their community with large herds of cattle and have up to five wives. What they admired was the fact that the Sukuma have wealth (cows) and have manpower, both cows and children. Above all, when it comes to food shortages, they can sell cows to buy food. A Sukuma woman interviewed in her vernacular language at Kitomanga Village (in Lindi region) because she could not speak Swahili boldly claimed that most women in Lindi are afraid of delivering at short intervals. For her, this is due to economic reasons, particularly when they imagine how to feed their children. She even referred to people in Lindi as poor (*maskini*) simply because they cannot feed their few children. This point is addressed in greater detail in the last section of this chapter, which focuses on the contrasts in the preferred and actual number of children as well as birth intervals between women in Lindi and Shinyanga.

Interestingly, it was reported and is supported with quantitative data that more men increasingly accompany their wives or partners to ANC services. As such, they discuss and decide together with their wives on contraceptive use and family planning matters. The figures for Lindi's urban municipal hospital have increased from less than 23 men in 2010 to 157 men in 2011 and 499 men in 2012. The proportion of women who came with a male partner was estimated at an average of at least two men for every 5 women at a rural health facility of Kitomanga in Lindi. To motivate male participation in family planning, health providers in Lindi have improvised several strategies, such as providing fast track services to

women who come with their partners to the health facility, and providing men with additional services like medical examination.

However, discussions with men, especially in urban Lindi did contradict the image created by the figures cited earlier. According to the participants in one of the FGDs, it was debatable as to what extent men are willing to go to ANC with their wives. They argued that those few men who accompany their wives to the health facilities for ANC services are mainly new couples and probably those who belong to the elite segment of the community in Lindi urban where the majority were migrants from other part of Tanzania¹. The participants believed that taking time to accompany a partner to the health facility just for ANC services is unbecoming because they have to forego their daily economic activities (*mihangaiko/pilikapilika*), which are equally central in the efforts to cope with hard times. Pointing to the inter-subjective rhythm of the reproductive practices, the participants confirmed that they know for sure that many women secretly use contraceptives. This point is further illuminated below in the lived experiences of women using contraception.

Although religious beliefs and teachings can sometimes seem to oppose contraceptive use, the everyday economic realities of the people in Lindi, where the majority are Muslim, have necessitated increased use of contraceptives. The people of Lindi still seek justification for child spacing within religious beliefs and teaching. For instance, many participants in FGDs from both rural and urban areas in Lindi shared a belief that child spacing is inherent in Islamic values and customs. Specifically, they claimed that Islamic teachings stipulate that a mother should breastfeed for not less than two years.

Apparently, the teachings have been appropriated in the societal values as explained by participants in the FGDs so that the practice of child spacing is not new among communities in Lindi. Short birth intervals were and still are stigmatized. They are equated to lack of self-control among couples, especially by the man and associated with lack of care for the child who is expected to be given space to thrive. Short intervals are associated with *kubemenda* (stunted growth of child), and the responsible parents would be faced with *aibu* (shame). As a matter of principle, a man was not allowed to have sex with his wife until she stopped breast feeding. In the past, polygamy allowed women to abstain for an extended period of time, but today, the taboo opens space for contraceptive use by those who still draw on such references in the course of their reproductive actions (see women's lived experiences). That is to say, rather than abstaining, *kubemenda* can be avoided through the use of contraceptives².

Furthermore, a closer examination of marriage arrangements and practices in Lindi region shed light on the dynamics of birth intervals in the region. Both FGDs with men and in-depth interviews with women attested that the valued and most common marriage practices in the area entail both direct and indirect interactions between partners. This is followed by consultation with parents through the famous letter of engagement (*barua ya uchumba*). The latter is often sent by a representative (*mshenga*) of the male partner to the parents of the woman to be married. Recently, however, the partner himself may decide to submit the letter. Often, the letter goes with a small amount of money³, which not only

¹ Few other participants, mainly elderly people were skeptical about the increased utilization of contraceptives. For them family planning is one of the undesired outcome of *maendeleo* (development). They don't see that family planning is a solution to life hardship (*maisha magumu*) because even those who have few children are still facing the same hardship.

² By and large, contraceptives are viewed positively by both men as well as women in the area (with few exceptions), as it allows women and men to engage in their everyday struggles instead of having to concentrate on child rearing.

³ The money is figuratively referred to as *miwani* (eyeglasses).

expresses the commitment of the potential groom but also motivates parents to positively consider the message embodied in the letter.

After the proposal is accepted, the woman who has been chosen has to agree with the man on the bride price. The woman not only decides on the amount to be paid by the husband but also owns the money. To be sure, it is her own money. The amount ranges between TZS 30,000 and 400,000 (20 USD and 265 USD). However, there are also cases where the bride price is neither demanded nor paid. To what extent this leaves room for women to negotiate power in marital affairs and child spacing is the question to which we return in the last section of this chapter.

In ideal terms, as wives, women are expected to respect their husbands and perform duties pertaining to the domestic sphere. In the past, men would shoulder all activities outside the domestic sphere and women were not allowed to engage in such duties. However, with increasing economic hardships, such values have been challenged following the decline in men's earning power. From men, women expect all basic needs to be met, at least in theory, but as we show in the portraits of women's lives, most women currently strive to meet some of the basic needs in addition to depending on men. What is worth noting at this juncture is the fact that divorce and remarriage are not uncommon practices in Lindi region. A glance at marital biographies of our informants (see vignettes) shows that most of the women were in their second or third marriages. Others were simply single mothers after a divorce or the death of a husband.

Equally important, having children is regarded as a responsibility from a religious point of view. The social and cultural values articulate that if one does not have children, he or she is regarded as destitute (*fukara*) with nobody to continue one's blood line upon death. However, it was also insistently noted by participants in FGDs that while the number of children is not important, it matters that one has a child or children⁴. This is also reflected in women's narratives about preferred number of children. Although many women, especially in Lindi town, had an idea of a desired total number of children, many women in Kitomanga (Lindi rural) could hardly think in such terms. For them it was simply important to space children but not to plan in the rationalistic sense (see vignettes from Lindi rural).

Lived experiences of women from urban and rural Lindi

In the paragraphs that follow we present ten vignettes of women's marital and reproductive experiences from Lindi region: five from urban settings (Lindi town) and another five from rural settings (Kitomanga village). The aim is to shed light on the ways in which women (pro)actively (dis)engage with both societal expectations and their own aspirations in concrete circumstances. This is critical in our attempt to understand how and why women try to time their pregnancies in certain situations and not in others.

Vignette 1: Lindi urban (Number 2111)

She is a housewife living in Lindi town. She was seen by the man who became her husband at home, where he often passed. The man was already married and living with another woman, but he told her that he was in love with her. It took a while before she accepted his proposal and asked him to follow the standard marriage procedures. She was twenty when she got married and received a bride price of TZS 200,000 (about 150 USD). She became pregnant one month after marriage. According to her, this was not accidental but anticipated. She is satisfied with her relationship as a second wife and enjoys her husband's schedule in the sense that he is sometimes available and sometimes unavailable. She wants to

⁴ Most of the participants alluded to religious beliefs that it is God who gives children to a person as He wishes. As such it does not make sense to think of how many children one needs (*ni majaliwa ya Mwenyezi Mungu*).

have a total of three children and currently has two. In regards to child spacing, she believes that the ideal birth interval of a woman in her community is three years. Her actual birth intervals, including the one to be ended by her current pregnancy, vary between 38 and 41 months. This has been achieved through the use of pills after the first and second child. She anticipates looking for an effective contraceptive method upon having her third child in order to avoid pregnancy. She and her husband agree about the number of children they will have, and he supports her use of contraceptives.

Vignette 2: Lindi urban (Number 2112)

She is a widow with two children and expecting a third child. She was seen by the man who became her husband at home, and he approached her through her young sister. She got married at the age of 14; no bride price was paid. She became pregnant one month after she got married. Following the death of her husband and father of her two children, she found a boyfriend who later impregnated her but then disappeared. According to her, the ideal birth interval in her community is three years. In her case the interval between the first two births was 34 months, and the interval was 132 months for the current pregnancy. She wants to have three children. She already has two children and was in her third pregnancy. She has been using condoms, especially before she met the man responsible for her current pregnancy. She tried to convince him to use a condom but he refused, saying that he does not like them and is not used to them. Her strategy to avoid another pregnancy in the future is sterilization after her next delivery.

Vignette 3: Lindi urban (Number 2115)

She is a food vendor living with her second husband. She was first married at age 15. Following her completion of primary education, she lived with a boyfriend before she became pregnant. Then parents from both sides conferred and arranged that the two would get married. No bride price was paid. She divorced the first husband because he was having multiple partners; as she said, “he was fond of women.” She is getting along well with her current husband. She considers the ideal number of children in her community to be four, but her own desire is to have only two children, a number she already had from her first husband. However, she had to compromise her own aspirations in order to satisfy the demands of her current husband who wanted a child with her. He did not have any children at the time.

Regarding child spacing, she says that the ideal birth interval in her community is 48 months, and the lengths of her birth intervals (including one to be ended by the current pregnancy) are 48 and 54 months. She has been able to attain such spacing through the use of modern contraceptives: mainly injections, and at times, condoms. She intends to continue with the injections after delivery in order to achieve her desired number of children. She usually discusses family planning matters with her current husband. The two agreed to use contraceptives, but later the husband asked her not to seek another injection so that she would conceive. She considers that her husband may have thought that it would be acceptable to use contraceptives for some time. She does not know how many children her husband would like.

Vignette 4: Lindi urban (Number 2116)

She is a small-holder farmer and a mother of five children currently not married but cohabiting with a partner who is the father of her youngest child. She met her first husband on the farm. She had been asked before then by her parents to find someone to marry. At first she saw herself as not ready, commenting, “My parent told me that there will come a time when I will get pregnant by a person I do not know, and it would be better if I had someone.” She became pregnant one month after marriage. She lived with the first husband for almost 10 years and had two children. After her divorce, she met her second

husband who lived in her parent's neighborhood. She thus remarried and had two children with the second husband.

Following the termination of her second marriage (which lasted for 14 years), she met her current partner ("I later met this man that I live with and got the last child I have, although we are not married yet"). The bride price paid to her during the second marriage was TZS100,000 (about 65 USD). Her birth intervals periods are 36, 128, 36, 48, and 48 months. She wants to have a total of six children and currently has five children. She uses modern contraceptives to attain her desired spacing. She has used both injections and pills. She also plans to go for an IUD or sterilization after giving birth to a sixth child. She never had problems from her husbands with using contraceptives. As she said, he "doesn't care if I use them or not." However, she does not know her current partner's desired total number of children.

Vignette 5: Lindi urban (Number 2119)

She is a mother of five children, married and living with her husband, and engages in small business. She became pregnant while in secondary school, but the boyfriend did not accept the pregnancy. According to her, the situation subjected her to hard times (*maisha magumu*), because she had to shoulder the burdens and expenses of childrearing by herself with limited support from relatives before she met her husband. She sums up, "I had a very tough life with many problems, I was being helped by my relatives and I was also struggling until this man came into my life and helped me, and later married me." She met her husband three years after her first child was born, and he asked her to get married and also to have children with him. In this respect she said, "He met me when I had a three year old child and he told me he wanted us to get married and start a family so that I bear children for him." The two agreed that the man should go meet her parents and follow marriage procedures. She then got married at the age of 23 years.

She considers the ideal birth interval in her community to be three years, which is also mirrored in her birth intervals (57 months, 36 months, 36 months, and 39 months). Her desired number of children is five, which she has already attained. She has been using modern contraceptives, mainly injections and pills, though she has also used implants. As she noted, "I got an injection but later changed my mind and put implants." Since her last child is only five months old, she plans to start injections (*sindano*) as soon as the baby reaches 6 months. She usually discusses issues and agrees with her husband, but at times she simply decides and informs him afterwards. As she stated in response to a question about what the husband thinks about FP, "He has no views since when I decide to go to get the family planning services, I do so, and I later give him feedback. He usually agrees with me." Interestingly, she is also aware that her husband wanted a total of four children, a number that they have already achieved. As she declared, "He also has said that we should rest (*tupumzike*) since we have got the four already; they are enough."

Vignette 6: Lindi rural (Number 2208)

She is a mother of two children, now in her second marriage, and engages in food vending activities. She completed primary education and met her first husband for the first time at the market place when he approached her and proposed marriage. According to her, she advised him to follow the proper procedures by taking the matter to their parents. As she summed up the situation, "Ahaaaa! I met with him at the market place (...) I agreed, and told him that living without marriage was impossible to me." She was 21 when she first got married.

Following the split-up of her first marriage, she met her current husband on her way to visit a relative in the nearby village. As she explains, "...after being left there was my sister-in-law who used to live at the neighboring village of Mtipula (...) I was coming from home to that place, that man was living at Kilangala (another village) with a bicycle on his way to somewhere." Among other things in their

conversation, the man asked her whether she was married and had children. She explained to him that she was separated and had two children. After a long discussion, they later agreed to marry by following the normal marriage procedures, and the man paid a bride price directly to her. As she pointed out, “I did not decide a lot of money; it was only 80,000 (about 50 USD).”

As for her child bearing overall, she had her first pregnancy after marriage, as she confirmed, “Eeeh! He paid the bride price, we married, and in the course of living with him, I got my first pregnancy.” She considers that the ideal birth interval in her community is four years, and the interval of her current two births is 44 months. She wants to have four children in all, which means two more from her current husband. So far she has been using modern contraceptives, particularly injections. As she stated, “I got my first pregnancy, and when my child was about to sit down by itself (roughly six months) I went to the hospital and received a contraceptive injection...you see!” As a strategy to achieve the desired number of children at desired birth intervals, she anticipates using implants and conceiving every five years until she has four children. She did agree with the husband to remove the implant recently so that she would conceive (“He said that, we are going to remove it we arranged to visit the hospital and remove it”). She now thinks that her husband is alright with her using contraceptives except when he wants her to conceive.

Vignette 7: Lindi Rural (Number 2209)

She is a mother of four children living with her husband and engages in farming activities. She has no formal education. She met her husband for the first time at the farm where the two talked and agreed that the man should consult her parents about marriage procedures. Apparently, the man had already seen her parents before he came down to meet her on the farm. As she tells it:

“He went home to see my elders (meaning grandparents) and told them he is looking for a wife; and then my grandmother told him they have got a daughter, but she is working on the farm. So he came to the farm and told me that he was looking for a wife, and I asked him why; he told me he wanted to marry me.”

Ultimately, she got married at the age of 16 years and pocketed a bride wealth of TZS 30,000 (about 20 USD). Her reproductive trajectory commenced a few months after getting married. As she noted, “... (laughing) we just slept together; after three months I was pregnant with my first child.” In her own understanding, the ideal birth interval in her community is five years, but her actual birth intervals fluctuated from 62 months to 79 months before shortening to 31 months. She wants a large number of children because of the uncertainties surrounding reproductive practices and the upbringing of children. As she underlined,

“I can’t know that it’s all in God’s hand, you may deliver and unfortunately the child dies, so when it happens to other women, while they see their fellows have children, they decide to do nothing, no family planning. You find a person before 40 she gets pregnant, so to me I say God give me any child because you might have a child who is sick, another one can be mad, and yet another can be foolish.”

As noted above, she currently has four children and was expecting the fifth one, but she is concerned about spacing for reasons outlined below. To be able to space child bearing, she makes use of modern contraceptives, mainly pills, and the idea being “resting and conceiving again.” In this respect, she discusses matters of child spacing with her husband. As she pointed out,

“We discussed this together and agreed because he realized that if the baby is sick and then I get pregnant, that means it will be his role to bring him to the hospital, something which was difficult for

him. So we decided that I use family planning (meaning contraceptives) It was a must that he agree because it was impossible to join FP if your husband does not want.”

In view of the above, she and her husband accepted the use of modern contraceptives on the grounds that they are good for the child’s health, but they have not “planned” anything about the number of children they should have in all.

Vignette 8: Lindi rural (Number 2210)

She is a mother of two children, married and living with her husband. She has two children, one from her husband and the other born before she got married. She became pregnant before marriage with her then-boyfriend, who had initiated the processes of marrying her. She stated that, “he was not marrying me but we had a sexual relationship, that man had written a letter of engagement but his behavior was not good, so I left him.” She has a primary education and engages in farming activities in addition to being a housewife. She first met her husband through a connection with his sister who was also living in the same village. As she explained, “I met with that man through his sister who told me about him and decided to see him first before we agreed...” She was married at the age of 20, and a bride price of TZS 100,000 (about 65USD) was paid.

She considers that the ideal birth interval is four years, which is close to her own birth interval of 49 months. She feels that it is not possible to imagine a desired number of children because of general life uncertainties. She noted that, “I can’t know as I don’t know my future life.” However, she is keen to space her births with up to five or six year intervals taking the approach of waiting for her child to grow before she conceives again. In that respect, she uses mainly injections and the calendar method. She has never discussed any matters regarding family planning with her husband.

Vignette 9: Lindi rural (Number 2213)

She is in her third marriage, has no formal education, and works as a farmer. She met her first husband on the farm. She was first married at the age of 16, and a bride price of TZS 80,000 (about 50 USD) was paid. The second husband was a neighbor to her, while the third husband was advised about her by people who knew her through her aunt. She feels that her experience with marriage life has not been so good, not just in the first and second marriage, but also the current one in which she is the fourth wife. Her major complaint on the latest marriage is that the husband is not providing her with her daily needs. She believes that three years or more is the ideal birth interval for a woman in her community. Her actual birth intervals so far are 29 and 89 months. She wants to have three or four children in total, and currently has three children. She has used pills to delay pregnancy and would like to use injections in order to achieve her desired number of children, because her husband wishes to have as many children as possible. As she indicates, “For him, even if they are 20.” However, the two have discussed issues of spacing and have agreed that it is good “to have a rest” (delay pregnancy) between child births.

Vignette 10: Lindi rural (Number 2214)

In her third marriage, this woman has three children and never had any formal education. She engages in farming activities and food vending. She began first living with her boyfriend and was then married to him at the age of eighteen, but feels that she did not make an “informed” decision. She noted “this one it was because of childhood, I was simply cheated.” She later married another man whom she met at her food vending business. She commented that, “he found me in the business and was attracted to me (...) after he had invoked some desires in me, I invited him to my house. ”She met her latest husband during her trips to Dar es Salaam. As she reported, “this one it is this tendency of traveling frequently to Dar es Salaam, sometimes I was given lift (free transport); this has harmed me (got me pregnant).” She

considers that the ideal birth interval in her community is four years, though her actual intervals are 27 and 43 months. She has used injections and condoms in order to delay pregnancy, and will continue whenever she wants to delay or avoid pregnancy. She has discussed the use of contraceptives with her current husband. According to her, the husband supports “family planning” as she stressed, “...he is the one who told me that day that I should go for injection.” Nevertheless, she is not aware of her husband’s desired total number of children.

The complexities of persistent shorter birth intervals in Shinyanga

Findings from both rural and urban Shinyanga indicate that the contexts within which women enact their reproductive practices are not only diverse but also dynamic. Conversations with both men and women illuminate shared and contested views about child spacing in the region. Apparently, in their enactment of reproductive actions such as the timing of pregnancies, women engage with normative values related to having children, family size, womanhood/manhood and kinship on the one hand, and concrete every day social and economic circumstances on the other. For instance, despite increased family planning campaigns, having many children is still a valued practice in Shinyanga on several grounds.

First, it allows individual men and women to negotiate valued social positions in their communities. Expressions in that respect included “If you don't have children, you are despised in the community—you cannot speak out in the midst of people.” Explicit articulation in relation to valued number of children entailed “if I have eight children, you only have two...what can you tell me...” Pointing to a relatively shared understanding and experiences in everyday life, it was underlined, that there are situations where a person is denied the opportunity to influence decisions in a clan or community simply because he or she has few or no children. This is indicative in claims such as “...what can you tell us... you don't even have children or you only have two children.”⁵

In the same manner, participants insisted that in their cultural contexts, having many children is one of the sources of social respectability and honor. In this regard, one participant in the FGDs with men remarked “it’s an honor (*ni heshima*) to have children; when you are dead, one of the important things people ask first is how many children did the deceased leave behind.”⁶

Although the desired number of children seems to be changing, especially in urban Shinyanga as indicated in women’s lived experiences (see vignettes 11 to 20 below), the ideal or preferred number of children is at least eight children. From the perspectives of participants in FGDs and in-depth interviews, the necessity of having many children is rooted in multiple but related grounds. In what follows we highlight a few factors that account for the persistent high value of having many children in Shinyanga. First is the need to extend the clan which goes hand in hand with reproducing names of the (grand) parents, a practice that is commonly referred to as *kutana*. Here, the lineage is considered to be constituted by eight key figures (*ubhudugu bhulimunane*), namely the two grandparents– grandfather and grandmother (*bhabha nkulunamayu nkulu*) and two parents– father and mother (*bhabhanamayu*) of the husband and wife.

The second factor belongs to the pragmatic engagement with livelihood dynamics and the quest for future social security. In this regard, it was reported that children are valued not only for their

⁵ Notions about the ideal number of children also articulate images of preferred family size and forms of social respectability. Participants in FGDs in Shinyanga claimed that having many children gives respect and prestige to the man and his family. They attached positive image to a large family (*limji* or *lekaya*) and negative image to a small family (*kamji* or *kakaya*).

⁶ It was also noted by the FGD participants that it is a curse (*mkosi*) for a man or woman to die without children. This is perhaps the case in other parts of Tanzania even though with varied significance.

contribution in the day to day livelihood activities (mainly farming especially in rural areas) but also as care providers to parents when they grow older. This was reflected in declarations such as “we need to have children and grandchildren to send them off (...*watoto na wajukuu wakutuma*).”

In practice, the narratives reflect the realities of women’s lives especially in rural Shinyanga (see vignettes 16 through to 20). The preference for many children in Shinyanga urban was explained more in terms of future security. The idea is that if you have many children, at least one or two would help you when you need assistance. One participant noted (and was supported by others) that “all of them cannot end up being drug dealers or useless.” Interestingly, participants made reference to their own experiences or other parents whose sons or daughters are better off and send money to parents through mobile phone schemes such as MPESA.

Third, uncertainties surrounding child rearing and survival are also said to account for the need to have many children. In specific terms, there is a concern about how to cope with issues of mortality and morbidity from a wide array of causes as summed up by one of the participants in the FGDs with men in Shinyanga town, “...if you only have two to three children...God’s eye is on them. Malaria also targets them and above all, witches also hunt them...Can you still say you have children?” For that matter, individual men and women take into account the fact that it is impossible for them to oversee all possible constraints in the course of imagining and pursuing their reproductive trajectories (see also vignettes 11 to 20). This point is clarified further when juxtaposed with the next factor, marriage practices and expectations.

Analysis of both social and cultural ideals and lived experiences of individual women in Shinyanga shows that many reproductive practices, including the timing of pregnancies and deciding on the desired total number of children, are embedded into the prevailing marriage practices and expectations. Put differently, it is hardly possible to understand reproductive intentions and practices in Shinyanga without the understanding of the marriage systems and how they are enacted by individual actors (men and women). In what follows, we delineate the processes and practices of establishing a family in the context of Shinyanga region.

Given the waves of social transformations in Shinyanga (and elsewhere in Tanzania), marriage arrangements have changed from a longer period of courtship involving mainly parents to an increasingly shorter period, and rarely involving parents. Parents come into the picture at a later stage. In the past, parents would coordinate courtship. Today, two approaches towards marriage are commonly found in the area. One is the seemingly preferred approach that involves courtship, with parents of the man consulting parents of the woman, and negotiating bride wealth. In this approach, bride price can involve as many as 25 cows (it could reach 35 or more in the past) and is often concluded with a wedding ceremony. That approach is less common at the moment.

The other strategy is known as *kutorosha* or *kupura*, literally meaning “to run off with” the girl or woman. Once the man has taken the girl away, the parents of the girl are informed, and the man consults with them about the bride price. In most cases, fewer cows (fewer than 15) are paid as bride wealth. In addition, the man pays a penalty known as *mchenya*.

This strategy of taking a girl away is preferred by many, for it makes marriage less expensive, an advantage for households with many sons or with fewer cows.⁷ In both approaches, however, especially in

⁷ It must, however, be noted that marriage practices are diverse, especially in urban Shinyanga where at the moment a greater percentage of couples are simply co-habiting and not married. Beyond the rural-urban dichotomy, our findings show that even in the rural area, many of the young men and women prefer finding their own wives and

rural Shinyanga, the new couple stays within the compound of the husband's parents for years before they are given cows and land for cultivation to start their own household. During this period, the influence of the husband's parents is said to be predominant.

The discussions in FGDs with men in rural and urban Shinyanga demonstrated that men as well as their parents hold several expectations for a wife. The first and foremost is to bear children. If she does not bear a child after two to three years of marriage, they seek medical or traditional treatment for her. If treatment fails, her in-laws might recommend that the husband find another wife. It was also repeatedly voiced that a woman risks divorce if she is barren.

Second, a good wife is expected to master domestic chores and farming activities. Indeed, the discourse used in proposing marriage entails expressions of interest to have a good servant or a hard worker, especially in the rural areas. Third, a wife is expected to respect the husband and relatives, and be able to take care of the children and parents. Men are expected to ensure the provision of basic needs: food, clothing, and health care in case his wife becomes sick. But it was also noted that there is a strong reluctance to accompany wives to ANC, on the ground that it is a foreign tradition. As noted by one of the participant in the FGDs, "I don't imagine being on queue with women at clinic, it's really awkward..." However, according to the participants, this does not mean that men are not involved in maternal care, because they provide for the costs involved. They also claim more involvement during delivery and in child care.

More important, the findings show that for various reasons, most of the men in Shinyanga don't see any advantage in using contraceptives. Some are skeptical of side effects, as noted by one of the participants in the FGDs in Mwamalili village that "...some women have suffered because of the contraceptives by getting so thin and weak or so fat and lazy..." Many others believe that women using contraceptives are more likely to engage in extra marital sex, and thus contraceptive use is stigmatized. However, they (men) admit that a few women use contraceptives but don't discuss the matter with their husbands. Above all, findings from FGDs with men in both urban and rural areas of Shinyanga showed that men are not convinced that there is any harm in delivering many children with an interval of at least two years as remarked by one of the participants, "...our own mothers delivered up to ten children with an interval of two years, and they (mothers) are still healthy and strong..."

Lived experiences of women in urban and rural Shinyanga

As shown above, there is limited room for women to imagine or consider longer birth intervals in a context where shorter intervals are valued and rewarded at least symbolically. However, concrete circumstances, along with family planning campaigns and advice from health providers, tend to motivate women to consider choosing the timing of their pregnancies as revealed in the vignettes below. Yet women have still to grapple with the expectations and ideals noted above. This is reflected in the ways in which some women in Shinyanga seek and use contraceptives in order to space child bearing (see vignettes 11 through to 20).

Vignette 11: Shinyanga urban (Number 1106)

A mother of three children, she has primary school education and lives with her husband. She met her husband "on the road" as they were both working in the fields. He told her a number of times that he wanted her, but she refused for a few months. She finally accepted him after she failed her standard seven final examinations. At this point, marriage procedures were undertaken and a bride price of 8 cows along

husbands based on notions of love instead of arranged marriages. However, the latter still prevail in few instances where parents are very restrictive and such a parent is referred to as colonialist (*mkoloni*).

with TZS 400,000 (265 USD) was paid to her parents. She ultimately got married at the age of sixteen. Despite the expectations from different actors, including herself, that she would get pregnant a few months after marriage, it took her more than a year to conceive. Several individual and collective efforts were made to make sure that she got pregnant. According to her, it was the traditional medicine that facilitated her conception.

Overall, she is happy with the way her relationship with the husband is fairing. In terms of the ideal birth interval of a woman in her community, she believes that five years is the preferred interval. This may be in line with varied campaigns to promote child and maternal health in the area, but sharply contrasts with her actual birth intervals of 36 and 21 months. She wants to have four children in total: that is, one more child than she already has. She has used a variety of contraceptives ranging from traditional medicine, contraceptive injections and pills. Notably, she intends to sterilize after the next delivery even though she has never discussed the intention with her husband. She may be counting on her previous experience that she described when he endorsed her use of contraceptive pills. She does not know the husband's desired number of children.

Vignette 12: Shinyanga urban (Number 1107)

She is a mother of two children, and she was expecting her third child. She lives with her husband and works as a food vendor. Unlike most of the cases, the parents arranged the marriage for her to a man she had never seen before. She was forced to marry in a few days' time at the age of about 15 or 16 (she was not quite sure). Some of her relatives opposed the marriage, and she resisted, but was eventually forced to accept by the elders. A bride price of TZS 50,000 (33 USD) was paid to her parents. Reflecting on the situation, she feels that her parents destroyed her dream of a love marriage. According to her, the relationship with her husband was very awkward at first, and she was sad, but the situation improved later on such that they are able to discuss FP and the number of children they want to have. She became pregnant for the first time four months after marriage. She believes that the ideal birth interval in her community is five to six years, which is also reflected in her actual birth intervals of 50 months and 7 years. She wants to have a total of four children, and she currently has two. She used pills to delay her second and third pregnancy, and intends to adopt a similar strategy in order to achieve the desired total number of children. Put differently, she will take pills for several years before another pregnancy. Fortunately, her husband supports the use of contraceptives. He not only reminds her to take pills, but also gets them for her sometimes. The husband's desired total number of children is four and the two have discussed it.

Vignette 13: Shinyanga urban (Number 1109)

She is a widow with two children from her late husband, and was expecting a third child from her current partner who is supporting her. She has no formal education and no job at the moment, but expects to resume food vending in the near future. She met her current partner at her work place at a bus stop. He told her that he needs a wife, and he wanted her. She agreed quickly, because she had just lost her first husband. He did not present himself to her family. They are not truly married, but he comes to spend time with her every day. He has another wife somewhere and he sleeps at that wife's place. He had been telling her that he slept at his parents' place, but that is not true. She was very upset when she found out but was already eight months pregnant by him. That discovery has made her like him less.

For her, the ideal birth interval for a woman in her community is five to six years. She wants to have four children. She has been using contraceptive pills to delay pregnancy. For instance, she took pills until her husband died, and she resumed taking pills when she began the relationship with her current partner. She stopped the pills when her partner complained about not having a child with her. In the future, she intends to use pills until she is ready to become pregnant with a fourth child, then not have any

more. She discussed FP with her late husband, and he was not in favor of it because he believed that FP had negative effects such as causing cervical cancer. Accordingly, she used FP secretly. In fact, she told no one at all. Her current partner wants two children with her and she has tried to respond to his desires.

Vignette 14: Shinyanga urban (Number 1110)

She is one of the three wives to her husband, and has given birth to nine children, but two of them passed away. She was pregnant at the time of the interview. She was directly approached by her husband a long time ago, and they became lovers for some time; then he came and took her away (*kutorosha*). As such the bride price was paid later on. Only five cows were paid to her parents. She considers that three years is the preferred birth interval for a woman in her community. Her actual birth intervals from her seven surviving children were 52; 30; 33; 76; 32; 48; and 46 months. Although she has seven children so far, she is uncertain as to her desired total number of children. The situation is further complicated by the fact that she is unaware, and does not dare to discuss, her husband's desired number of children from her. Yet she feels that she is physically "worn out" and cannot afford to go on giving birth. Thus, she has been secretly using contraceptive pills and injections. To be sure, she did not tell her husband for fear that he would refuse to allow her to use FP methods. However, she already anticipates getting sterilized right after the next delivery.

Vignette 15: Shinyanga urban (Number 1108)

She is a mother of two children and was expecting her third child. Her reproductive trajectory shows that she was supposed to have four children by now, but her first two children died. She is married and living with her husband. She met the husband for the first time in Mwanza at a food vending store where she was working. They became lovers rapidly; he was saying that he wanted her and would like to marry her. She became pregnant during that time and after three months, they married. She was 17 years old. Her relationship with her husband was very good at the beginning, and has continued to be so. The main problem she has is that he often gets drunk and gets angry. After the first child died he got angry when she was not getting pregnant quickly and he sent her back to her parents for a while. She currently feels that he is not providing enough for their family, and she "makes bites"-*maandazi* (African donuts) in her efforts to fill the gap. As for the preferred birth intervals in her community, she believes that five years is the ideal interval. She has not followed that ideal in her actual intervals; at times she has had to conceive immediately for different reasons such as the death of the child, and efforts to achieve a desired number of children. So far, her actual birth intervals have been 54, 30, 35, and 27 months.

Unlike most of the cases where the husband's desired total number of children tends to be higher than that of the woman, she wants to have three children, but her husband wanted only two children. Her husband did not want her to conceive anymore because they could educate only two children. So she used contraceptive pills for two years, and then stopped the pills to become pregnant without telling her husband. Apparently, she did not tell her husband that she was pregnant but waited until he saw the signs and realized she was pregnant, so she could delay feeling his anger at her. As expected, he was upset. Now that she expects to achieve her desired number of children, she intends to get sterilized after she delivers this next child.

Depicting the dynamics inherent in the everyday marital practices, she confirmed that she rarely discusses FP matters with her husband because it may make him angry. Even though the husband wants only two children, a number that they have already achieved, she takes her contraceptives in secret. She believes that he is accepting of FP, but she also feels that issues pertaining to FP reside in the woman's domain. As she asserts, "It's you, the woman, who is responsible. Do you think a man cares? What does he know about family planning?" "But a man does not know anything. For him, what matters is sexual satisfaction that is all..." To put this in the experiential perspective, she also remarked that "When he

arrives home from his business, he eats his meal and goes to rest. There is very little time for conversation.”

Vignette 16: Shinyanga rural (Number 1202)

She is 29 years old, a mother of five children, married and engaged in farming activities. She got married at the age of 17 through the marriage practice of *kupurwa*. She met her husband for the first time when she was going to the husband’s aunt to collect her book from a classmate who was also a relative of the husband. As to how things transpired in that situation, she narrates,

I was locked inside the house (...) it happened that the relative I was in school with had my book; therefore I had to go to their place to get the book. On arrival at their place, I found him with several girls who went there to study together. They all left when I came, and I was left all alone and locked inside the house. Then to my surprise, I saw the man who is now my husband coming accompanied by his aunt, and she told me that this is the man who was sending letters to you (...). He said that he loved me; then we had to talk, but I refused and the talk went on until it was dark and I was afraid to go home all alone. He had to escort me to his home since we were then at his aunt’s place. I slept over at his place and again the second day I slept at his place, but the third day they had to go to my parents to give them the information that I was at their place, and after two days they went to pay the bride price.

A total of four cows and TZS 50,000 (33 USD) was paid to her parents, and she was officially married. According to her, the relationship with the husband was not so good at first, but right now life seems to be fine. She became pregnant two years after marriage. She believes that the ideal birth interval of a woman in her community is two years, which is also mirrored in her actual birth intervals of 22, 27, 28, 23, and 29 months. She aspires to have a total of seven children. Since she had five children and was expecting a sixth child, she anticipates one more pregnancy. Then she will talk to the husband about sterilization, and if the husband agrees, she intends to be sterilized. She has used injections and condoms to achieve her current birth intervals. She used contraceptives without consulting her husband, and the latter was very upset when he realized that she was on contraceptives. As she explained, “... He started talking a lot and complained, telling me that he wondered what my problem was that I started using such medicine ..., which made me stop using the injections and I got pregnant.” Although the husband has not told her explicitly how many children he wants in all, she thinks that he wants more than six children.

Vignette 17: Shinyanga rural (Number 1203)

She is 37 years old, a mother of four children, married and expecting her fifth child. Just like most of the women in rural Shinyanga, she engages in farming activities. She met her husband in the forest where they were grazing their animals. It is common for young women to engage in grazing activities in rural Shinyanga. The man tried to seduce her, and after three days, she agreed. They had sex in the forest for the first time; the second time the man asked her to go to his home. She agreed, and so returned the cattle to her home and went to the man’s home secretly. That is how they started living together. Thus, she was married through *kupurwa*, and a bride price of eight cows was paid to her parents.

So far she feels that her relationship with her husband is good. As for her reproductive trajectory, she got pregnant one year after marriage. She considers that it is ideal in her community for a woman to give birth after every three years. Her actual lengths of birth intervals have been 22, 41, 49, and 120 months. She has used injectables to delay pregnancy. She wants a total of five children, so she intends to be sterilized after her next delivery. However, she is aware that her husband wants eight children, which means three more than what she wants. She has discussed the use of FP with her husband, and he refused

to allow her to use contraceptives. However, later on, after the fourth pregnancy, he allowed her to use injectables.

Vignette 18: Shinyanga rural (Number 1204)

She is 28, a mother of five children, married and engaged in farming activities. She met her current husband at home. They talked and agreed to get married. Then their parents both agreed on the bride price and other arrangements. She was 16 years old at the time. A bride price of fifteen cows was paid to her parents, and after the wedding ceremony, she went to live with her husband. According to her, life was interesting to her and has been so since her overall relationship with her husband is good. She became pregnant soon after getting married. Her birth intervals have been 26, 30, 26, 26, and 27 months. She aspires to have a total of six children, but in case she gives birth to a baby girl in her next delivery, she will keep on trying until she has another baby boy so she will have at least two children to help care for her eventually. She has never used any contraceptive but is considering the possibility of sterilization after the next delivery. She discusses FP issues with her husband; in fact, it was the husband who proposed sterilization when she gave birth to the second child, but she refused. Her husband would now like to have five children in all, although in the beginning he wanted only two.

Vignette 19: Shinyanga rural (Number 1207)

She is a mother of four children, married, and engages in farming. She first met her husband at a dance where they danced together for a while. After a week he proposed to her and she refused. Later on she agreed to marry. She then decided to go to the man's house and began living with him without her parents' consent. Later on, the parents of the husband contacted her parents and arranged marriage procedures within the framework of *kupurwa*. Ultimately a bride price of nine cows was paid to her parents, and she was officially married at age 19. She became pregnant two months after marriage. Her birth intervals so far have been 25, 25, and 36 months. According to her, the ideal birth interval for a woman in her community is three years. She has attempted the use of injectables, but stopped because her in-laws as well as her husband objected. They feared that she would lose her fertility. She does not discuss FP matters with her husband.

Vignette 20: Shinyanga rural (Number 1214)

She is 32, a mother of six children, married, engages in petty business, and was expecting her seventh child. She used to meet a boyfriend in the bush, and they developed an intimate relationship. When she became pregnant, the man decided to introduce himself to her parents. After she gave birth, the boyfriend visited her parents again and arrangements were made for them to marry. She was 19 years old. A bride price of three cows was paid to her parents. She feels that she has a happy marriage. This, according to her, can be shown by the husband's supportive hand in the household chores such as cooking and fetching water. Nevertheless, she does not discuss matters pertaining to child birth or number of children with her husband. She believes that two years and six months is the ideal length of birth intervals for a woman in her community. As noted earlier, she started childbearing before marriage; her birth intervals have been 41, 23, 18, 41, 17, and 23 months. Like many other women in rural Shinyanga, she aspires to have ten children. She has never used any contraceptives, and her strategy to achieve the desired number of children is to keep on reproducing by God's will until she reaches the desired number.

5.2 Contrasts in the contexts of women's reproductive lives in Lindi and Shinyanga: Implications for temporal differences in birth intervals

Findings from conversations with both men and women in Lindi and Shinyanga indicate several differences not only in the contexts but also the actual reproductive actions of women within and across

the regions. For the purpose of the current study we focus on interrelated aspects that clearly explain the temporal variation in birth intervals between the two regions. These include, but are not limited to, marriage practices; livelihood conditions and notions of hardships of life; the degree of male involvement in and support for FP; cultural beliefs and values attached to post-partum abstinence, and male involvement in FP.

Whereas marriage practices in Shinyanga often involve payment of a high bride price to the woman's parents, low or no bride price is paid to the woman (not her parents) in Lindi. Unlike in Shinyanga, where parents of the woman who decides to divorce her husband are obliged to repay the bride price, women in Lindi do not have to pay back the bride price in case of divorce. Practices of divorce and remarriage are more common in Lindi compared to Shinyanga. This is depicted in the marital biographies of the respondents, where the majority of the women in Lindi were in their second or third marriage, while most women in Shinyanga were in their first marriage. In contrast with Lindi, where young couples immediately establish their own family with limited influence of parents, most newly married couples, especially in rural Shinyanga, build their family under the auspices of the husband's parents. In this sense, the couples are not only concerned with their own expectations/aspirations but must also pay attention to the expectations of the hosting parents with whom they interact every day.

In regard to child bearing, the parents who have spent a couple of cows as bride wealth expect the new couple to reproduce plenty of children.⁸ Accordingly such living arrangements in rural Shinyanga add to the recipe for continuity of certain cultural values and practices from the past to the present generation, while the living arrangements of the new couples in Lindi leave more spaces for discontinuity.⁹

Furthermore, there are clear differences in the organization of livelihood activities in Lindi and Shinyanga. Women's and children's labor have always been valued in the sustenance of livelihood in Shinyanga, hence contributing to the persistent preference of many children in the region. In contrast, men have traditionally been responsible for livelihood activities outside the domestic sphere to ensure that they provide for the basic needs of their households in Lindi region at least until recently.¹⁰ To a certain degree, this explains why men and women in Lindi do not consider having many children as a resource in shouldering livelihood activities. In Shinyanga, many children are valued by most couples and their parents due to their contribution in the household chores, animal grazing and farming.¹¹ These activities are central to the provision of basic needs and other aspects of everyday life of the couples, and their

⁸ In cases where a woman fails to reproduce enough children (between six and ten), she is regarded as less fertile, a status that provokes culturally-sanctioned direct ridicule from the husband's parents and other members of the community towards both the woman in question and her husband. As noted earlier, in such a situation, parents would propose that their son either divorce the woman or add another woman as a wife, or both. The fear of being divorced can be understood in relation to the very low status attached to the woman in question as well as to her own parents and the obligation to repay the bride price.

⁹ However, this in no way means that there is no room for social and cultural continuity in Lindi or discontinuity in Shinyanga. As social actors, individual men and women belong to multiple social relations beyond their families and local communities. The point here is that the local contexts of Lindi and Shinyanga provide different spaces for different reproductive practices.

¹⁰ Generally speaking, the majority in Shinyanga combine crop cultivation and pastoralism, especially in the rural areas, and depend heavily on annual crops, which are labour intensive. On the other hand, the major livelihood activity in Lindi is crop production but with more concentration on annual crops such as cashew nuts and coconuts that are less labour intensive.

¹¹ Children are also considered as social security for the parents when the latter grow older.

parents. Above all, they add on to the image of the respective family in terms of whether it is a successful or failed family from the point of view of other community members.

Thus, unlike in Lindi, the ability of the woman to produce many children is rewarded with a positive image for her and her husband in Shinyanga. In concrete terms, women are expected to master the domestic chores along with production activities to ensure the availability of food in her own household even when it is still part of a larger household of the husband's parents.¹² Here, it can be in the interest of women to have lots of children to help them in executing these tasks. For example, the woman may be the first or second wife with several sons who also have their own wives, and some of them may still live within the same compound. She may no longer have sufficient energy to master both the domestic chores and farming activities but will depend on the son's wives and grandchildren to help out. The anticipation to continue conceiving until she gives birth to a second son (as portrayed in vignette 18) is the best illustration of this point.

Notions of the hard times of life also vary between Lindi and Shinyanga. On one hand, there is a strong concern in Lindi to have fewer children and ensure longer birth intervals because of increased life hardships (*maisha magumu*). The hardships are explained in terms of dwindling opportunities for earning a living along with the emerging additional expenses of child rearing such as schooling. In their everyday life many people in Lindi, both men and women, experience difficulties in satisfying their basic needs. Here, family planning campaigns find fertile ground, and make sense to the people in relation to their lived experiences.¹³

On the other hand, notions of the hardships of life in Shinyanga are perceived in relation to reduced harvest and number of cows in a household, especially in rural areas. However, rather than discouraging people from having many children, it seems to intensify the need for many children. As noted earlier, children not only contribute much needed manpower to boost farming and pastoralist activities, but they also serve as sources of care during old age. In that respect, efforts to promote family planning compete with efforts to cope with real life uncertainties. Nevertheless, the lived experiences of women in urban Shinyanga indicate that ongoing social transformations such as urbanization are increasingly (though at slow pace) divorcing people from direct dependence on agriculture and pastoralism. Such reduced dependence will challenge the need for many children inherent in the basic strategies for earning a living in Shinyanga.

Another difference between the regions is that unlike in Shinyanga, where there is no apparent tradition that encourages post-partum abstinence, it is taboo for a man in Lindi to have sex with his wife for the entire period of breastfeeding. This understanding is meant to allow the child to grow before the arrival of another pregnancy. However, it appears that promotion of modern contraceptives in Lindi has been appropriated to fulfill similar ends without having to abstain. This also explains the increase in the use of contraceptives in the region.

Last but not least is the relative difference in male involvement in ANC services and discussions of FP between spouses in Lindi and Shinyanga. Whereas there seems to be an increase in the readiness of men to accompany their spouses to the health facility for ANC services both in rural and urban areas of Lindi region, most men in Shinyanga do not support such practices. Accompanying a partner to clinic is

¹² In Shinyanga, especially the rural areas, it is common to have several households in one compound, but each may be allocated its own fields to cultivate.

¹³ The notion of family planning as presented in various campaigns has also been appropriated beyond its rationalistic sense of means-end in order to accommodate a series of uncertainties characterizing reproductive lives in Lindi.

equated to being controlled by one's wife (*kankomola akakima*), and one gets ridiculed as a weak husband. Just like some men in Lindi, most men in Shinyanga confirmed that they have heard messages encouraging them to accompany partners to ANC services, but find it unbecoming.

Likewise, more women discuss FP matters with their husbands in Lindi than in Shinyanga. This is partly entwined in the differences in marriage practices between the two regions as discussed earlier. However, as social agents, women in both regions creatively open space for using contraceptives (at least temporarily) without necessarily upsetting their husbands and other actors who do not support such reproductive practices.

CHAPTER 6: REGIONAL CONTRASTS/DIFFERENCES AND BIRTH INTERVALS

6.1 Introduction

This chapter provides a synthesis of the main issues that emerge in both quantitative and qualitative findings pertaining to the differences in the personal, contextual, and experiential factors that account for the temporal variation in birth intervals between Shinyanga and Lindi region. In relation to the main puzzle of the current study, the aim here is to reflect on how birth intervals have lengthened and the contraceptive prevalence rate (CPR) has dramatically increased over 20 years in Lindi compared with Shinyanga. What is striking in both approaches (quantitative and qualitative evidence) is the fact that the seemingly common social determinants such as education and urbanization do not seem to have a direct influence on the contrasts in birth intervals between the two regions as one would expect. This does not mean that such factors do not play any role in shaping women's reproductive choices. Rather, they do not determine (in the strict sense of determining) the actions taken by women in a linear fashion.

The analysis of DHS data in chapter four earmarked differences between Western and Southern Zones as well as Shinyanga and Lindi regions in the following areas: percentage of women who prefer more than six children; fertility rate; duration of post-partum abstinence; and the use of contraceptives (CPR) among others. With regard to the main research question, the noted differences provide some clue into the factors that account for longer and shorter birth intervals in Lindi and Shinyanga respectively. However, this does not provide sufficient understanding of the factors that underlie the differences. Why has CPR become so high in Lindi but remained relatively low in Shinyanga? Why has the percentage of women preferring more than six children declined substantially in Lindi but not in Shinyanga? How do women in Lindi manage to have longer duration of post-partum abstinence compared with their counterparts in Shinyanga? These are some of the questions that we have addressed in the analysis of qualitative findings in chapter five.

Beyond mainstream understanding of social determinants of reproductive practices, a closer analysis of women's and men's narratives shows that various factors embedded in the social, cultural, and economic contexts of Lindi and Shinyanga account for the temporal disparity in birth intervals between the two regions. Several aspects stand out. These include:

- variations in household economic organization;
- marriage practices and living arrangements;
- the value of children;
- cultural understandings and values attached to post-partum abstinence;
- male involvement in FP.

It is through the contextual aspects that we explain longer birth intervals in Lindi and shorter birth intervals in Shinyanga.

When examining the median length of birth intervals (in months) by zone in various DHS surveys (see Table 1), the data show that there has been a remarkably larger increase in the duration of birth intervals in the Southern Zone where Lindi is located, than in the Western Zone, where Shinyanga belongs. The duration of birth intervals in the Southern Zone has increased from 36 months in 1991 to 48 months in 2010, while it has remained constant (30 months) in the Western Zone during the same period.

At the same time, the DHS surveys reveal a far more dramatic increase in the use of contraception in Lindi (8% in 1991 to 38% in 2010) than in Shinyanga (1% in 1991 to 11% in 2010).

It is this kind of reality that raised a number of immediate questions central to the focus of this study. First, why has the duration of birth intervals increased significantly more in Lindi than in Shinyanga? Second, and related to the first question, why have contraceptives become important in the lives of many women (and men) in Lindi, but not in Shinyanga? According to the Ministry of Health and Social Welfare, the government has been implementing the same interventions with the same amount of resources around the country. If this statement is true, why does Lindi perform better in the two areas of birth intervals and use of contraceptives? What are the characteristics or unique features of these two regions? How different or similar are they? How do these characteristics and features influence their temporal trends of birth intervals and use of contraceptives?

Although we have discussed this series of questions in detail in chapter five, we again, albeit in brief, provide a highlight of specific but interrelated contextual issues that explain the differences of the two regions. We explain how these differences affect and influence the use of contraception and the consequential variation in birth intervals between Lindi and Shinyanga. We have divided these contextual factors into three groups; namely, (1) social and economic organization, (2) marriage patterns and gender relations, and (3) health interventions. After a brief note about the differences in Shinyanga and Lindi more than 20 years ago, we begin with a discussion on social and economic organization.

The introduction of the report indicated that we would comment on the likely explanations for how and why the median birth intervals were 30 months in Western Zone and 36 months in Southern Zone in the 1991 DHS survey. The same survey showed that the percentage of women who had ever used contraception was 6% in Western Zone and 13% in Southern Zone, and CPR was 2% and 4% respectively. The three elements most likely to have impacted the median length of birth intervals are the marriage practices and household locations (*vis-à-vis* inlaws), the need for child labor for production, and Islamic principles on post-partum abstinence and breast-feeding. Marriage in Western Zone required high bride price payments to parents of the young woman who then went to live with her in-laws for some years. As detailed earlier (see chapter five) and later in the subsequent sections of this chapter, for Shinyanga, the system of production based on agriculture and livestock raising required child labor in ways not found in Southern Zone, encouraging high fertility rates. The population of Western Zone was 15% Muslim while Southern Zone was 60% Muslim, so the latter would be far more influenced by Islam than the former.

6.2 Social and economic organization

How people organize their social and economic lives significantly influences their ideas, actions, and their daily social practices in general. This organization affects people's perceptions as well as how they evaluate themselves and others. This conceptual framework applies equally to what we have learned in both Lindi and Shinyanga.

Information derived from various social and economic profiles of Lindi demonstrates that for many years, the region has not been doing well economically compared to other regions in Tanzania. In general, Lindi is among the poorest and most underdeveloped regions in Tanzania. According to the National Population Census of 2002, Lindi had the highest rate of chronic malnutrition in the country (54%) when the national average was 38%. In addition, Lindi was one of the poorest regions with a GDP per capita of Tanzanian sh. 150,000 (Mbelwa, 2008). Although the mainstay of the economy is agriculture (corn, cassava, millet, and beans), land used for subsistence farming is small, and therefore agricultural farming does not bring significant resources to the family.

With the fishing industry still relatively underdeveloped, cashew nut and coconut production remain the leading cash crops. Yet, their prices in the market have been low for many years, leading to situations where some farmers have abandoned coconut and cashew nut trees. Whether it is farming for food or for cash crops, one reality of Lindi that contrasts with agriculture in Shinyanga is the fact that agriculture does not require considerable child labor. Also, it does not allow the people of Lindi to enjoy a sustainable economy. People in Lindi have few material resources in the region in both rural and urban areas.

The economic situation in Shinyanga differs in several aspects when compared with that in Lindi. For many individuals, cash crop farming, including cotton, tobacco, and other food crops, such as paddy rice, beans, corn, sorghum, and sweet potatoes, has been common and predominant. According to the Social Economic Profile of Shinyanga of 2007, the Shinyanga region has the largest planted area of maize and the second largest area of paddy rice and sorghum, more than any other region in Tanzania (Regional Profile 2007). The agricultural sector comprises approximately 75% of the regional economy and employs about 90% of the working population in the region. Apart from agriculture, livestock-keeping is also a significant economic activity. In the past decade, the mining industry has also become one of the significant economic activities in the region. Although it is indeed difficult to judge whether people in Shinyanga are better off economically than those in Lindi, there are certainly differences between the two regions in terms of their economic organization.

The first difference is that, in a situation of drought or poor agricultural production, the presence of livestock keeping and recently employment in the mining industry provides the people of Shinyanga a safety net that can help them survive during severely trying times. A second difference is the nature of economic activities themselves; while in Shinyanga farming produces cash crops for the market (cotton, tobacco, etc.) as well as for food (corn, paddy rice, sweet potatoes, etc.), these food crops, especially rice, are also sold to the market as cash crops. In Lindi, with the exception of cashew nuts and coconuts, peasants cultivate crops in small fields to produce food for the family with only a minimal portion going to the market for sale. This type of farming has implications in terms of patterns of consumption in the region as well as how people perceive poverty. A third difference is that, agriculture and livestock keeping are important economic activities in Shinyanga but not in Lindi. Since livestock keeping as well as farming systems in Shinyanga exert a high demand of child labor, it is likely that such economy may tend to have a strong influence on how people in Shinyanga perceive the value of children as a source of labor and future investment.

As a crucial aspect of any social organization, the economy, especially its inherent dynamics, seems to have encouraged and discouraged the use of contraception in Lindi and Shinyanga respectively. On the one hand, prolonged economic difficulties in Lindi or *maisha magumu* (hard times) leading to difficulties in obtaining basic needs have triggered desires for both child spacing and fewer children. Coupled with other factors explained below, the difficulties identified paved a way for positive responses towards family planning campaigns, which in turn increased the use of contraceptives. In addition, shifts in the organization of household economics in Lindi (see chapter two and chapter five) have also been at odds with the need for many children.

On the other hand, the onset of hard times in Shinyanga, especially in the rural areas, have consolidated the desire for many children as a source of manpower to boost farming and pastoralist activities as well as domestic activities in the extended families. In such contexts, family planning campaigns tend to compete with the demands of household economics. Such changes in the household economic organization, as reflected in lived experiences of women in Shinyanga urban, not only reduce direct dependence on agriculture and livestock raising, but also discourage the need for many children. As a result, there has been an increase in the use of contraception in Shinyanga urban compared with Shinyanga rural.

6.3 Marriage patterns and gender relations

Marriage practices and the living arrangements of the couples in Lindi leave more space for women to control their own reproductive activity, including the timing of pregnancies, in comparison with Shinyanga. As outlined earlier in chapter five, little or no amount of money is paid as bride price to the parents of the woman in Lindi. This is in sharp contrast to Shinyanga, where marriage patterns follow a patrilineal descent system, become patrilocal, and involve payment of a high bride price to the woman's parents (not the woman). Whereas bride wealth has to be repaid in case of divorce in Shinyanga, this is not the case in Lindi.

In the Shinyanga context, men/husbands tend to wield more social and economic power than women/wives. While that is also the case in Lindi, the disparity between men and women has been reduced, and women have far more power over marital affairs and reproductive actions than do women in Shinyanga. Divorce and remarriage are more common practices in Lindi compared with Shinyanga, as reflected in women's narratives on the history of their marital life. Moreover, young couples immediately establish their own family with limited influence of parents in Lindi, but their counterparts, especially in rural Shinyanga, spend several years with the extended family of the husband's parents. Here, women's reproductive intentions and practices take into account the expectations of the hosting parents.

As underlined in the previous chapter, quite often, the parents who paid cows as bride wealth expect the new couple to reciprocate by reproducing many children. As a corollary, forces of continuation of the value for many children and shorter birth intervals are much stronger in Shinyanga compared to Lindi. It is no wonder therefore that family planning campaigns appear to have been more culturally accepted in Lindi than in Shinyanga.

Moreover, another element in the dynamics in the relationship between husbands and wives (gender relations) offers a window for explaining differences in birth intervals in Lindi and Shinyanga. In particular, we refer to the communication about FP between couples or partners, and male involvement in ANC services. As noted in chapter five, more women discuss FP matters with their husbands in Lindi than in Shinyanga. This is in keeping with the expectations that many men in Lindi see and make sense of the importance of FP in line with their concrete circumstances or lived experiences as underlined earlier. For instance, with limited opportunities for earning a living, women are increasingly expected to indulge in production activities apart from reproduction, as was traditional in the past.

In addition, many communities in Lindi region were traditionally matrilineal (see Beidelman 1967). As such, it is plausible to assume that despite social changes, some elements of the matrilineal descent system and associated matrilineal social and cultural relations have been retained in the social organization of the majority of the ethnic groups in Lindi (see Wembar-Rashid 1975; Dondeyne et al. 2003).

Apparently, elements of matrilineal values and customs co-exist with the seemingly consolidated patriarchy system. This also explains why many women are able to discuss FP matters with their spouses. The presence of social and economic power among women in Lindi gives them the power as well as confidence to discuss those issues with their spouses without fearing masculinity. However, the situation is not the same for their counterparts in Shinyanga, who are not expected to discursively engage their spouses on FP issues, given the predominance of the patriarchal system.

The individual interviews and FGDs also reveal that, increasingly, some men in Lindi are accompanying their spouses to the health facility for ANC services, a practice that allows men to be exposed to modern methods of FP and contraception. The same practice is highly discouraged by most men in Shinyanga region. In the latter, accompanying a partner to clinic reflects negatively on one's

masculinity and sense of social respectability in the community. Thus, many men, both in Shinyanga and Lindi, seem to be aware of the view that requires them to accompany their spouse to ANC services but ignore it on the basis that it is simply “unbecoming.”

All in all, the cultural and structural differences noted above are essential but insufficient in accounting for systematic differences in birth intervals in the two regions unless combined with individual women’s active and creative engagements with multiple social expectations along with their own aspirations for the timing of pregnancies. Their own desired birth intervals or/and total number of children are not necessarily in harmony with the societal expectations or that of their husbands. Equally important are concrete life situations such as the death of a husband or break up of one’s marriage; illness; and the need for care and support from men and from their own children. It must also be emphasized that experiences of women in Shinyanga and Lindi in relation to birth intervals do not conform to coherent, linear, normative, and rigid pre-established patterns. It is clear that birth intervals, be they shorter or longer, are a result of active social practices enacted by social actors who belong to webs of social relationships. The findings of this study have far reaching implications both in terms of further research and interventions focusing on reproductive intentions and practices as indicated below.

6.4 Reproductive health interventions

The paucity of data and information makes us unable to document in a detailed manner the forms of intervention related to reproductive health that have been implemented in the two regions. However, information derived from the Ministry of Health and Social Welfare itself confirms that Lindi and other southern regions have enjoyed a variety of health related interventions for a long time, interventions other than family planning ones. These regions in general, but especially Lindi, have been able to attract a variety of development assistance during the last 25 years, likely more so than the Shinyanga region. For example, the government of Finland provided assistance to Lindi from 1974 to 1993. The approach that Finland adapted was a demand-led participatory approach, aiming to involve local communities in planning and empowering them to execute their own development programs. A wide range of projects were introduced and implemented during this time, including water (Finwater Project), health, and agricultural projects.

The Finnish assistance resulted in the establishment of a new strategy, RIPS (Regional Integrated Project Support), which was introduced in 1988. RIPS played a major role in promoting development in Lindi and Mtwara as its projects were diverse yet integrated. The projects included food production improvement, provision of clean water, nutrition, and family planning. The success of RIPS ended up attracting numerous donors such as Save the Children and UNICEF. For example, in health related issues, Save the Children’s efforts included working with local governments in order to increase access to health service for newborns, children under five years of age, and pregnant and lactating mothers through local IMCI rollout, and a two-year cash transfer program in Lindi region aimed at increasing the household income of poor families and reducing chronic malnutrition.

Other donors active in Lindi during the last ten or more years are Elizabeth Glaser Pediatric AIDS Foundation (EGPAF), focusing on HIV and AIDS care and treatment programs; Aga Khan Health Services Tanzania and Aga Khan Foundation, water projects; Clinton HIV AIDS Initiative, HIV and AIDS care and treatment; and African Medical Research Foundation (AMREF). Of course, one should not forget the role played by UMATI (Family Planning Organization of Tanzania) and other support from the central government that has been channeled through the Ministry of Health and Social Welfare and finally, the Districts Councils.

When compared to Lindi, besides the support from UMATI and the central government, it is evident that Shinyanga has not enjoyed similar investments and interventions from various donors during

the last 25 years. EGPAF began supporting HIV and AIDS care and treatment programs in 2006/07. EngenderHealth also became an active player in the region on issues related to reproductive health in 2003. Taking into consideration that these various interventions involve components of awareness-raising in communities about the importance of reproductive health, one can predict that Lindi may have experienced a relative advantage, which in turn has played a role in influencing the temporal trends that we now see in terms of uptake of contraceptives and longer birth intervals than in Shinyanga. New studies remain to be done in order to assess what the impact of these interventions have been in Lindi, how they have influenced the duration of birth intervals as well as uptake of contraceptives, and how replicable they are elsewhere.

6.5 Conclusion

We have presented the contextual factors that were found to be social determinants of how people in both Lindi and Shinyanga perceive and embrace or reject health interventions that advocate family planning and child spacing. However, we have found that the main determinants of the use of FP are not found in individual knowledge and attitudes toward FP. Rather, they are found in the social, cultural and economic interactions of everyday life. Since these determinants vary and differ between the two regions, the understanding, interpretation, and meaning of these interventions in people's lives will certainly vary and differ. What this means in terms of interventions is that one should not approach the two regions/two zones with interventions that are uniform and similar.

For example, in Lindi, both men and women are likely to welcome and embrace family planning and child spacing campaigns because they see such interventions as complementing their own efforts of reducing poverty (*maisha magumu*) and improving their livelihood (*kuboresha maisha*). Such interventions also enhance their religious (Islamic) teachings that encourage breastfeeding of up to at least two years. The interventions also help avoid the stigma associated with shorter birth intervals, which is equated to lack of self-control among men and is strongly stigmatized behavior regarded as shameful. Further, people in Lindi may embrace these interventions because of their concern that shorter birth intervals may produce stunted children (*kubemenda*), which again is a great shame to the parents (*aibu kubwa*). To them, the policies are in favor of producing fewer children, something that they prefer because of the fear of needing to feed many children (*watoto wengi watakula nini*) as well as other costs such as sending them to school (*gharama za kusomesha*).

The people in Shinyanga, on the contrary, may perceive the same interventions differently and therefore internalize the meaning of such interventions in another fashion. To many people in Shinyanga, these interventions are perceived as barriers rather than enablers of their interests of having many children, which is a symbol of masculine achievement on the one hand, and a source of cheap labor and future investment on the other. These interventions play against their traditional interest of building and extending the clan so that it is bigger (*kutana*), and having many children and grandchildren that can help in various activities (*watoto na wajukuu wa kutuma*).

One can consider these beliefs and actions as simple and straightforward, but in terms of social practice, they greatly influence how people view and evaluate interventions that are introduced in their homes and communities by outsiders, be it government or local or foreign non-governmental organizations.

The findings of this study point to several main lessons for the promotion of family planning programs in Western and Southern Zones of Tanzania. One, the promotion of family planning through health education and making methods more accessible does not guarantee large increases in the use of contraceptives. While knowledge and opportunity are essential for the adoption of modern contraception, the discourse around FP must also address the possible benefits of planned pregnancies within the local

social and economic context. For Shinyanga, that context includes the symbolic value of children for male success and the usefulness of child labor. Two, the patterns of marriage, divorce, and gender relations have a major impact on how a population responds to the availability of family planning. Three, other interventions related to health and health services may facilitate the use of family planning methods. Four, factors within the social and economic context may have a direct effect on the actions taken by both husbands and wives regarding timing of pregnancies. When these factors change, the actions taken related to the spacing of births and reproductive health in general will shift as well.

Furthermore, our findings privilege an understanding of reproductive intentions and actions as embedded in the wider social and cultural contexts but oriented according to individuals' lived experiences. The empirical evidence presented and discussed above corroborates an emerging but critical strand of research on reproductive practices (see for example Johnson-Hanks 2005; 2006). Specifically, the findings challenge western rationalistic notions of "family planning" and shed light on how such notions become manipulated, transformed, accepted, and/or rejected by individual men and women. Concretely, many people in Lindi have appropriated the use of contraception because it allows for certain social goals to be attained. Likewise, most of the people in Shinyanga are against modern contraceptives and the idea of family planning. For them, family planning campaigns may not make sense because they are not only at odds with their lived experiences, but they also compete with their valued traditions and practices.

Moreover, findings from this study show that expert knowledge, for instance about family planning, is not passively received by the target populations, but the latter actively and dynamically interacts with the former (see also Hobart 1993; Johnson-Hanks 2005; Obrist 2006). This calls for approaching men and women as agents in themselves who willingly or unwillingly strive for multiple social belonging throughout their reproductive lives.

CHAPTER 7: CONCLUSION AND RECOMMENDATIONS

Our findings have shown that the main determinants of the use of FP are not found in individual knowledge and attitudes toward family planning. Rather, they are found in the social, cultural and economic interactions of everyday life. The findings add much to our knowledge of the intricacies of reproductive intentions, choices, and actions related to family planning (see Johnson-Hanks 2005). In particular, we have shown the importance of understanding underlying factors and how they shape reproductive choices beyond mainstream understanding of social determinants of family planning. In that respect, the study calls for closer examination of the conditions that make family planning more important or less important to a particular individual, group, community, and society.

It is also critical to appreciate the fact that expert understandings of family planning, often derived from Western notions of rationality, may or may not be appropriate in the non-Western social and cultural contexts. We need to better understand notions of family planning that are context specific. In the same manner, we need to give weight to the actor-oriented approaches because actors may have different lived experiences and understanding of family planning and its associated issues.

Methodological considerations related to the complexities inherent in people's reproductive practices are also important. This requires transcending statistical computations to do justice to actors' reproductive intentions and actions. Genuine triangulation between quantitative and qualitative approaches can be very revealing (see also Johnson-Hanks 2007; Price and Hawkins 2002). Additionally, and specifically for Lindi and Shinyanga regions or Southern and Western Zone in Tanzania, we need ethnographically grounded understanding of the many open and empirical questions about temporal variations in birth intervals within and across the zones and regions.

The dynamics in the relationship between husbands and wives deserve particular attention and offer a window for explaining differences in birth intervals in Lindi and Shinyanga. As noted in the findings, more women discuss FP matters with their husbands in Lindi compared to Shinyanga. Many men in Lindi see and make sense of the importance of FP as consistent with their concrete circumstances or lived experiences as underlined earlier. For instance, with limited opportunities for earning a living, women are increasingly expected to participate in production activities in contrast with their role in the past. However, the situation is different for their counterparts in Shinyanga who have difficulties discussing FP issues with their spouses because of the large inequality in the ability to make decisions that affect family life. Whereas some men in Lindi are increasingly accompanying their spouses to the health facility for ANC services, the same practice is highly discouraged by most men in Shinyanga region.

The cultural and structural differences are essential but insufficient in accounting for systematic differences in birth intervals in the two regions. They must be combined with, first of all, the individual women's active and creative engagements with multiple social expectations, and second, their own aspirations in regards to the timing of pregnancies and subsequent birth intervals. Yet these two factors are frequently not in harmony. Concrete life situations such as the death of a husband or break up of one's marriage leading into a new marriage, illness, and the need for care and support from men and their own children are also equally important considerations. We also emphasize that experiences of women in Shinyanga and Lindi in relation to birth intervals do not conform to coherent, linear, normative, and rigid pre-established patterns.

If we accept the assertion that images of family planning are context-specific when considered locally, we need also to consider context-specific intervention programs. That is, FP interventions should be conceived and implemented with an understanding of local desires for birth spacing and the nature of

the communication between spouses about family planning. Women take action on family planning in a social context of their relationship to their husband, their in-laws, and their network of family and friends. Programs will have a better chance of success if they recognize such realities. Programs that are locally contextualized and culturally specific have a far greater chance of success than those defined from the outside.

One way of making interventions culturally-specific is to seek to involve men in the process of reproductive health. An example of this approach would be to encourage men to accompany their wives to antenatal clinics, and to provide incentives to those who do so. For example, Lindi's incentive program includes a fast track service for those patients that attend ANC as couples so that they do not stand in long lines awaiting service for an extensive time. It is a policy that is working well in Lindi in terms of attracting men to join their significant others in ANC services. Other regions in Tanzania have similar incentive strategies. A study carried out recently noted that Rukwa region has not only adopted the Lindi model, but has also added another novel strategy of its own. All men that accompany their wives to ANC are awarded official letters, signed by the District Executive Director, congratulating them for doing so (Lugalla et al, 2013).

Creating an environment that increases the options for women in family planning is one step forward. Such initiatives ought to engage carefully with existing local systems of social relationships and practices, including gender. Lindi provides us with a meaningful example. Men are slowly beginning to work together with their wives on reproductive health issues. They often discuss the use of family planning and accompany their partners to ANC where they are counseled and educated as couples. Information derived from some health care providers in Lindi confirms that men who accompany their wives or partners to ANC tend to be less resistant to the use of various methods of family planning in general, and specifically to the whole concept of birth spacing, as well as having fewer children.

Since elders in Tanzania are highly respected and their advice is valued, elders should be able to play a leading role in changing traditions that perpetuate gender inequality and oppose family planning. Family planning programs need to take advantage of the potential power that the Sukuma male and female elders in Shinyanga have and train them to promote family planning and gender equality. At present, most family planning programs tend to target women only. Once male elders understand the benefits of birth spacing, they may be able to affect changes in the Sukuma culture and ways of life. In addition, the current practice of holding family planning education/seminars or workshops in health facilities or in ANC clinics should be reconsidered to allow for meeting in schools, stores, shopping centres, civic centers, and other places where people congregate.

The following guidelines for intervention programs in family planning are recommended.

- Revise the expectations of FP programs to take into account the social and economic context of local populations in program design and implementation;
- Train FP providers to widen their views of what is relevant for the promotion of FP;
- Shape the programs to be socially and culturally contextualized;
- Expand the program to directly involve men in the process of ANC services and in decisions about birth spacing;
- Find ways to do community outreach so that the health care providers better understand how couples talk about birth spacing.

- Develop policies that create a social environment that enables women to become active participants of their own improvement, empowerment, and emancipation.
- Find ways to discourage the practices that facilitate early marriages and restrict girls from being enrolled in schools.
- Create an environment that increases the options for women to discuss their ideas about reproductive health with others and to take action themselves.
- Call upon elders to embrace birth spacing and promote family planning in their communities.
- Persuade religious leaders to play a role similar to elders in promoting family planning.
- As a long-term policy strategy, we recommend Tanzania begins integrating education on family planning, sexuality, and gender equality into its core curriculum in both ordinary and advanced secondary education.

To promote sexuality and family planning education in the Western zone, it would be helpful if people understood family planning as an important factor in their social, economic, and development process. The current approach of using only health care providers to promote family planning is misleading, for the benefits of family planning extend far beyond health. Success becomes more probable if people involved in promoting social change and development in the Western Zone participate actively in promoting family planning in both rural and urban areas. This approach should also be applied in Lindi in order to maintain and increase the momentum of success that is already happening there.

Promoting longer birth intervals in Shinyanga and the Western Zone in general, ought to be a long-term project that overlaps with different realms. To assume that it will take a trajectory that Lindi and the Southern Zone have gone through is a mistake, for they display major contextual and historical differences. Whether or not the trends in birth spacing in Lindi and its sister regions in Southern Tanzania will be sustained in future is an open empirical question. Yet, at least for now, Lindi has shown that a population with relatively few material resources can find ways to lengthen their birth intervals.

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APPENDIX

A. Screening form for potential respondents (women)

Interview Number | ___| | ___| | ___|

(ID number of interviewer [1-5] plus number of interview [two digits])

Screening Form: Women with two or more children

1 Region ___Shinyanga ___Lindi

2 Health care facility _____

3 Village/Ward residence _____

4 Age (How old are you?) ___years

5 Married/co-habiting ___Yes ___No

6 Number of years married ___years ___Not married

7 Number of co-wives 0 1 2 3+ ___Not married

8 Education ___None ___primary ___some secondary ___completed secondary
___more than secondary

9 Number of children born _____

10 Birthdates of children 1___/___/___/ 2___/___/___/ 3___/___/___/

4___/___/___/ 5___/___/___/ 6___/___/___/ 7___/___/___/ [dd/mo/yr/]

11 Ever used modern contraception? ___Yes ___No

B. Conversation guide for interviews with women

Topic guide for conversations with women

1. Introduction

We have come to talk to you about the lives of women, children and families. Please tell us a few things about yourself and your family: your age, the people living in your household, the children you have and take care of, your work, your education, and your plans for the future.

2. Finding a husband

Please tell me about how you got married. Who found your husband for you, how you met, and what you thought about all that before you got married.

- Hearing about her husband
- Relatives and friends involved in engagement
- Her own role in these events
- Beginning of sexual relations
- Setting up a new household with husband

3. Current situation of her family and children

Please tell me about the children you already have and if you want to have more children sooner or later.

- Description of each child
- Number of children she expects to have in all
- How she plans to arrive at that number
- Number of children her husband would like to have

4. Birth history

We are very interested in hearing about how and when each of your children was born and how old you were at each birth. Can you please talk about that?

- Her age at first birth
- How long after marriage was the first birth
- Her age at each birth
- Months between each birth
- Thoughts about getting pregnant again

5. History of use of contraception

We would also like to hear your thoughts about different ways to delay pregnancy, whether traditional or modern. Have you ever tried to delay a pregnancy? What did you do the first time you used a method?

- First use of any method
- Use of any method after delivery of a child
- Preferred modern method
- Obtaining a modern method
- General thoughts about family planning
- Ideas of her husband on family planning

6. The length of birth intervals

Let's talk now about the length of time between births that women in this area try to have. What do women and men say about how long to wait until you get pregnant again? Are there special terms in Swahili for the length of time between births? What do you yourself think?

- Opinion about the ideal length of time between births
- Her own efforts to space her deliveries
- Her satisfaction at the spacing of her own births
- Her ideas about how the spacing of births has changed over time in her area

7. Most recent birth

Finally, we would like you to talk a bit more about your most recent birth. How did the delivery go, and what was life like for you in the first weeks after the delivery?

- Initiation of breast feeding
- Counseling for her provided in health care facility or by TBA
- Her own return to working
- Return of menses
- Resumption of sexual relations with her husband
- Any use of contraception and at what point after delivery

8. Final thoughts

We have talked a lot about children, family planning, and the length of time between births. What other thoughts do you have to add?

C. Conversation guide for interviews with health care providers

Conversations with health care providers offering FP methods

I. Basic Information

Please tell me a little about yourself, your background, and your work here. What education have you completed? What kinds of training did you receive? How did you happen to begin work here? How long have you worked here? What do you like about working here?

- Age
- Education
- Specialized training
- Being hired to work here

II. Work responsibilities here at the health centre

Please tell me about the work that you have been doing in this facility over the years. We are interested in hearing about the services you provide, the challenges you face, and the types of clients you serve most often.

- Different services you provide
- Challenges you face
- Types of clients you serve
- Services you are best prepared to provide

III. Provision of contraceptive services

Finally, let's talk about how family planning methods are provided in this facility. What methods are available? What methods are most popular among clients? What methods are the most effective?

- Methods available
- Methods preferred by women
- Methods that are the most effective
- The ways that women decide which method to use
- The circumstances in which women most often use a FP method
- The kind of counseling they provide
- Suggestions for improving the provision of contraceptive services

D. Conversation guide for focus groups with men

Focus Group Discussion: Men

Welcome

Hello. My name is Richard and we have called you here together to talk about families, women, and children. We are doing a study with CESTRE, a research group based in Dar es Salaam that does a lot of studies in Tanzania related to the health of men, women and children. So we have several different topics I would like to discuss with you. I hope each of you can participate and share your thoughts about the topics. We want everyone to participate so we hear from everyone.

Theme One: Ways men get married in this area

- How to find a woman
- How to contact the family
- Gifts to exchange
- Payments to make
- Ceremonies to arrange

Theme Two: The ideal wife

- What men look for in a woman
- How do you judge whether a woman will be suitable or not
- The things women should do for a man and his family
- Things a man does for his wife
- Ways to solve problems between a husband and wife when they arise

Theme Three: Creating a family: Having children

- The importance of children
- The right number of children
- What to do to have the number of children you want
- How to influence when to have children
- Advantages and disadvantages of using family planning

Themes Four: Any other topic you would like to discuss?