Use of Biomedical Obstetric Care in South-central Tanzania:
Production and Effects of Embodied Inequality

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A dissertation submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the Department of Maternal and Child Health, Gillings School of Global Public Health.

Chapel Hill
2009

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Abstract

Sydney A. Spangler: Use of Biomedical Obstetric Care in South-central Tanzania: Production and Effects of Embodied Inequality
(Under the direction of Trude Bennett and Dorothy Holland)

In order to reduce high levels of maternal mortality and morbidity in resource-poor countries, institutions working for maternal health have committed to making biomedical obstetric care more available to all women during childbirth. However, implementation of this strategy does not appear to be reaching women at the lower end of the socioeconomic spectrum, while those at the upper end are getting more and higher-quality services. At present, there is insufficient knowledge on how states and processes of inequality influence demand for, decisions about, and behavior towards and away from obstetric care. We are also lacking information on the quality and delivery of this care in specific contexts, including how well established schemes for assessing obstetric services apply to the care actually being performed.

The purpose of this dissertation, therefore, is to better understand use of obstetric care in a rural Tanzanian setting where this care is being supplied, including identification of what existing services consist of and the manner in which they are delivered. Most especially, this research explains how and why social and material positioning among women affect choices and actions in relation to biomedical obstetric care. To approach this work comprehensively, an interdisciplinary approach was taken that draws on theoretical perspectives from social epidemiology, medical anthropology, and development studies. Methods employed include descriptive statistics, participant observation, logistic regression analysis, and ethnographic
interviews. Taken together, the study findings indicate that a great deal of complexity exists in how obstetric services are performed, who uses them, and for what reasons. It is not simply a matter of what women want but also what they can reasonably access – women seek and receive the particular care available to them according to their relative positioning in society.

In order to effectively make biomedical obstetric care available to all women at childbirth, we need to improve assessment schemes so that they allow for more realistic interpretation and thus more appropriate interventions. We also need to prioritize research, policy, and programs that explicitly aim to improve accessibility of obstetric services for women who are socially and materially disadvantaged.
Acknowledgements

Many people have influenced my dissertation (and even contributed to it directly) through astute commentary, creative discussion, and practical advice. Others made this work possible by taking me to the airport, caring for my animals, connecting me with resources, or simply encouraging me to keep it up. In this short section, I would like to express gratitude to all these individuals for their support and assistance – whatever the form.

First and foremost, sincere thanks to each of my dissertation committee members, both past and present. Trude Bennett, my Dissertation Chair, has been a strong advisor throughout the course of my studies but has always given me the freedom to pursue independent work. She took on the thorny task of helping me clarify my thinking for Chapter II., and when I doubted whether I could finish on time she demonstrated faith in my ability to rise to the occasion and complete the work. Dottie Holland, Dissertation Advisor (and guide extraordinaire to inductive analysis), has been an invaluable mentor who committed time and energy to me even though I was not officially an anthropology student. Most of what I’ve come to understand and believe about epistemology and ethnographic methods, I learned from her. Credit also goes to Shelah Bloom for direction on the quantitative component of my work, as well as for her solid advocacy while I was navigating the politics of collaboration. Ann Dunbar magically managed to bring me up to speed on topics at which I was nearly novice – African colonial legacies and contemporary lives of women south of the Sahara. Patsy Bailey contributed vital expertise on current research and programs concerning safe motherhood. Finally, there was the indispensable facilitation provided by Philip Setel,
who not only hooked me up with a funding source, field site, and research assistant, but also helped me to distill what is most important from all the rest.

A range of other faculty members and students at the Gillings School of Global Public Health have added to this work in one way or another. In particular are members of my doctoral student cohort in the Department of Maternal and Child Health and the inadvertent ways in which they eased the passage. Sometimes just having people to laugh with (as well as commiserate among) makes all the difference. I need to acknowledge the Anthropology Department at UNC as well, especially for its fantastic graduate-level courses on development studies, human rights, medical anthropology, and identity. The Odum Institute for Research in Social Science deserves high recognition for the statistical consulting services of which I shamelessly took advantage (here’s hoping that next time I’ll be able to sort out the more complicated Stata code myself). I truly feel I’ve been surrounded by the best.

To my colleagues in Tanzania who assisted with this project – asante sana. I have no doubt this project could not have proceeded so smoothly without Christina Makungu, my wonderful research assistant and future co-author. Christina’s sharp intellect, perceptive insight, and excellent organizational abilities compensated far and away for her reluctance to ride a bicycle. The contributions of my highly skilled driver, Gallus, extended beyond the critical task of transportation – not only did he always get us where we needed to go, he also taught me a great deal about village life and lent comic relief to our little research team. Many others at the Ifakara Health Institute supported my fieldwork, especially Mathew Mwanyangala, Rose Nathan, Honorati Urassa, and Hassan Mshinda. Finally, I don’t know where I would have been without those who fast became my family in the Kilombero Valley:
Tanya, Sandra, Sarah, Jason, Anja, Erik, Coumien, Heather, Leka. No thanks can adequately express my gratitude for what these individuals provided – among other things, a lovely place to stay, fabulous meals, rides to the river, weekend safaris, and people I could depend on for anything.

In terms of funding, I need to first acknowledge the Maternal and Infant Health Branch of the Division of Reproductive Health at the Centers for Disease Control and Prevention (CDC). The work Mary Goodwin and Amy Ratcliffe did to bring me on as an independent contractor for the Postpartum Interview Study was what landed me in the Kilombero Valley to begin with and gave me the financial means to conduct my own research. I also greatly appreciate the opportunity to be involved with this study, which offered valuable experience on the generation of survey data. Additional funding for my dissertation project includes a Royster Society of Fellows Dissertation Completion Award and an Off-Campus Dissertation Award from the Graduate School at UNC, as well as a Predissertation Travel Award from UNC’s Center for Global Initiatives (CGI). Funding for other aspects of my PhD studies includes two years of assistance from the Foreign Language and Area Studies Fellowship administrated by CGI and a first-year Merit Scholarship from the Graduate School.

These acknowledgments could never be complete without recognizing the influence of people in spheres of life outside the study, both wider and further back. Here I have been blessed beyond the normal measure. My family has continually expressed confidence in my abilities as well as a belief in the value of education for its own sake. My friends, so many of who were pursuing their own amazing life endeavors during this time (academic and other), have been nothing but supportive and often unbelievably so. Special appreciation to my
parents as well as to Kristen and Devon Sparks for seeing me off on my trips, giving me somewhere to crash, and willingly providing love and care for my animals while I was busy “running around Africa.” I also want to mention a few friends who were also my most transformative mentors at the University of Utah: Charles Hughes and Laurence Loeb in the Department of Anthropology and Joyce Foster, along with a number of other incredible midwives, at the College of Nursing. Without rehashing an oft-used metaphor, I can confirm with particular certainty that producing a dissertation is not unlike delivering a baby – especially when laboring with a primip. After what seems a never-ending labor of patience, tenacity, and sometimes excruciating effort, suddenly…it’s over.

Last, a few words of gratitude to all the residents of the Kilombero Valley who participated in my study. The Reproductive and Child Health coordinators I worked with at the district level made unparalleled key consultants, providing me with directive hints on pertinent problems related to obstetric care. Birth attendants and obstetric providers, both “traditional” and biomedical, openly invited me to observe and participate in their practice – an act I highly value and strove to respect in attempting honest, reflexive analysis and presentation. Most especially, my deepest thanks to the many women and family members who allowed me into their homes, fields, and spaces of delivery so that I could better understand the dilemma of childbirth. Above all, I hope I have represented these women and their stories well, making visible both their strengths and their struggles. Ninawashukuru.
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Chapter I. Introduction

Despite considerable investment of global health resources over the past 20 years, complications related to pregnancy and childbirth continue to threaten the lives and health of women in many poor countries. However, recent estimates from the World Health Organization (WHO) indicate that just 13 countries account for approximately 70% of maternal deaths in the world, nearly half of which are African nations south of the Sahara. As a region, sub-Saharan Africa has the highest maternal mortality ratio in the world, with an estimated 920 maternal deaths per 100,000 live births. This figure stands in stark contrast with industrialized nations, which combined have a ratio of 20. As one of the handful of countries that bear a disproportionately high burden of global maternal deaths, Tanzania is well acquainted with the consequences of these losses. Women here face an estimated one in ten lifetime chance of dying from obstetric complications, as compared to a one in 4,000 risk for women in industrialized nations (1, 2).

In light of its dire costs to public health and human rights, the United Nations (UN) community has recognized this issue as a priority problem. Reducing maternal mortality by three-fourths is included as one of eight UN Millennium Development Goals to be reached by the year 2015. As of yet, however, there are no signs of progress towards this goal in most countries of sub-Saharan Africa. Instead, the crisis in this region appears to have stagnated or, in the case of some nations, become worse since the establishment of the international Safe Motherhood Initiative in 1987 (3). Because complications of childbirth cannot be adequately predicted or prevented, it is widely agreed that the most effective strategy for
reducing maternal mortality is to make some form of biomedical obstetric care available to all women during childbirth. Whether defined as skilled attendance, professional childbirth care, emergency obstetric care, or health centre intrapartum care, most experts agree that a core strategy of providing biomedical care at delivery is necessary to save women’s lives and reduce unacceptably high levels of maternal mortality (4, 5). Unfortunately, sub-Saharan Africa demonstrates dismal figures on use of this service as well, where over 90% of women in most countries receive some antenatal care but only an estimated 44% deliver with skilled professionals or in health facilities (3, 6).

Certainly, lack of availability contributes to this under-use. Supply of obstetric care requires a broad base of support in the form of a functioning health care system – something that a majority of African nations are still struggling to put into place. However, demographic data indicate that even where this service is provided, many women do not receive it. Although improving supply of adequate services is clearly necessary, it may not be sufficient. Obstetric care must be sought if it is to be received, and there is reason to believe that women neither seek nor receive this care in uniform fashion. Specifically, recent data from the World Bank suggests that interventions aimed at increasing the proportion of deliveries with biomedical obstetric care are not reaching women at the lower end of the socioeconomic spectrum, while those at the upper end are obtaining more and higher-quality services. In favoring better-off groups, implementation of the current strategy to reduce maternal mortality may actually be contributing to uneven outcomes between the relatively poor and the well off – a troubling effect, provided that the need for this service is often greater among women who are disadvantaged (7-10).
Despite this problem, most international organizations dealing with maternal-newborn health are committed to making biomedical obstetric care more available to those who continue to be seen in aggregate as “third world women.” Resources are currently being poured into supplying this care in regions with high maternal morality, even though relatively little is known about how (and by whom) it will be used. Given this situation, how and why obstetric services are taken up at the local level by women in differing positions across economic, ethnic, educational, religious, family, age, and other lines become critical questions. In particular, the multi-dimensional ways in which states and processes of inequality influence the demand side of the reproductive health care equation need to be better understood. The WHO Task Force on Research Priorities for Equity in Health calls for more studies that decipher the effects of socioeconomic positioning on access to health services as well as on health outcomes (11). Such knowledge could inform maternal-newborn health strategies (and their implementation) that are specifically designed to meet the needs of disadvantaged populations.

Also important to recognize is that, just as women and families do not behave consistently with respect to childbirth services, neither is there a single standard of biomedical obstetric care (modern, Western, allopathic) that remains fixed and static once transplanted to a new locality – overcoming all historical, political, economic, social, and cultural influences. Echoing medical anthropologist Carolyn Sargent, Van Hollen argues that biomedicine is not a monolith and the biomedicalization of childbirth is not a monolithic process, either within or across national boundaries. Rather, biomedical obstetric care is a fluid entity that emerges locally – not only in shaping local perceptions and experiences of childbirth but also in being transformed by these itself, taking on unique contours that reflect
the understandings of actors in a particular time and place (12). But diverse as this care may
be, we must remember that, as a system of medicine and thus knowledge, biomedicine is also
a socially constructed apparatus of culture and power (13). Thus, appreciating what
biomedical services consists of and mean in different contexts is crucial for understanding
how and why people use or do not use them.

At present, there is a dearth of knowledge on ways in which states and processes of
inequality influence action – specifically demand for, decisions about, and behavior towards
and away from obstetric care. There is also insufficient information on the delivery and
quality of this care in contexts of sub-Saharan Africa, including how applicable current
means of assessment are to services in such localities. The purpose of this work, therefore, is
to better understand use of obstetric care in a rural Tanzanian setting where this care is being
supplied, including what obstetric services amount to here and the manner in which they are
delivered. Most especially, I am seeking to explain how and why women of different social
and material positions use the particular care that is available to them – with an explicit
emphasis on processes of social exclusion as they relate to this action.

With this background and these driving questions in mind, I will now review the
more particular aims of the study. The first is to recognize what biomedical obstetric care
consists of and how it is performed in the 25 rural villages that make up the study setting,
located within the Kilombero Valley of south-central Tanzania. Second is to identify who is
using this care, who is not, and how these women compare with each other on characteristics
that might indicate social and material status (such as age, parity, ethnicity, marital status,
education, occupation, household assets, etc.). Third is to explore how and for what reasons
different women use or do not use obstetric care from their perspectives and experiences in
conjunction with my own. The final aim is to provide a deeper examination of how social and material inequalities are embodied through the process of seeking and accessing care at childbirth, including the ways in which inequalities are produced on both micro and macro-levels at the site of childbirth. In order to address these aims comprehensively, I take an interdisciplinary approach that combines theory and methods from public health and anthropology as well as from feminist and development studies.

*Theoretical Perspectives*

The use of theory in this study occurs less as a conceptual framework that gives predetermined explanations and more as larger perspective that guides the research overall and raises questions through the lens of its understanding (14). Theoretical lenses used here include postmodernist feminism, socio-cultural understandings of identity, and stances on embodied inequality from social epidemiology and medical anthropology. In brief, the former perspective stems from criticisms articulated by a number of feminists in the South (Chandra Mohanty, Aihwa Ong, Lila Abu-Lughod, and others) in response to assumptions in Northern feminist writings that create an aggregate image of the “third world woman.” Such a colonialist move depicts all women in the South as poor, domestic, uneducated, tradition-bound, powerless, and oppressed (15). In order to avoid this move, a number of feminists (Linda Nicholson, Nancy Fraser, Moya Lloyd, Donna Haraway, Jane Parpart, Marianne Marchand) argue for a middle ground that combines political activism with the sensitivity of postmodern thinking in seeking consensus between an aggressive universalism that opposes systematic abuse and a particularism that embraces local context but does not dissolve into abstraction or relativity (16, 17).
For all its necessity, the strategy to provide biomedical obstetric care to all women in poor and transitional countries seems to rest on an assumption that these women are passive, homogenous beings who will uniformly seek and receive this service once it is supplied. Of this supposition, postmodern feminist theory would take a critical stance, questioning how this service might be adopted unevenly among women of differing social and material positions in a particular time and place. In addition, it might challenge the idea of an exclusive model of biomedical obstetrics imported from the West that is expected to remain unadulterated by the everyday spaces in which it operates. Rather, this perspective would predict that any form of obstetric care would be selectively “embraced, rejected, and reinterpreted” by diverse members of the “target population,” facilitating a transformation of both childbirth practices and social identities in the process ((18) p. 35).

Another theoretical lens used in this study is the idea of embodied inequality as delineated by social epidemiologist Nancy Krieger and medical anthropologists Vinh-Kim Nguyen and Karine Peschard. Essentially, this concept is the process by which unequal social relations are literally incorporated within bodies and then expressed as inequitable health outcomes in populations (19). The latter authors claim that ethnographic methods can broaden and deepen conventional epidemiologic understandings derived from quantitative findings, as these are well suited to shed light on how specific social hierarchies are translated into disease and how this relationship is inscribed within a wider historical and socio-cultural context (20). A concept that can be used to examine this embodiment is that of social exclusion, broadly defined as channels through which individuals or groups are, to some degree, excluded from the society in which they live (21). Arising from French sociologists, this concept echoes work of Amartya Sen and Peter Townsend in offering a
view of disadvantage that extends beyond material deprivation. While overlapping with notions of poverty, it emphasizes relational issues (lack of ties to family, community, and State) as well as distributional ones (lack of resources). Thus, exclusion is a process as well as a state, where social and political aspects of disadvantage are just as important as economic dimensions. Besides arguing that this concept illuminates mechanisms of marginalization better than poverty alone, its advocates also contend that its focus on social relations acknowledges agency of the excluded (21-23).

A final perspective brought to this research involves the workings of identity and agency as conceptualized by anthropologists Dorothy Holland, William Lachicotte Jr., Debra Skinner, and Carole Caine. According to these authors, identity comprises the multiple, emotionally salient self-understandings that people hold in relation to culturally and socially constructed “figured worlds” – durable (but alterable) realms of collective interpretation in which specific characters are recognized, significance is assigned to particular actions, and certain outcomes are valued above others. Cutting across these worlds are traits that concern one’s position relative to others, or a person’s sense of social place that hinges on power, privilege, entitlement, and negotiation of these. As opposed to an Eriksonian view that self-understandings become fixed once psychodynamic maturation has been reached, this perspective sees identity as continually forming and re-forming in social practice according to historically specific but ever-fluid contexts. Agency takes place as people improvise action in a space where personal habitus and cultural logic meet a particular combination of circumstances for which there is no set response. The limits of agency therefore depend on identity, both in relation to figured worlds (i.e. biomedical health facilities) and social positioning (i.e. degree of social exclusion and inclusion). Constraints and possibilities for
behavior, including care sought and received at childbirth, are thus determined by the shifting landscape upon which these processes are worked out (24).

Research Methodology

With the increasing popularity of mixed method approaches, research is now frequently seen as existing on a continuum, with entirely quantitative studies at one end, purely qualitative work at the other, and a range of designs in between. Abbas Tashakkori and Charles Teddlie, proponents of mixed-method research, assert that this conceptualization rejects an either-or approach and a forced choice between positivism and constructivism. Instead, it offers a “pragmatic” paradigm where the research question is more important than either the methods used to produce data or the worldviews underlying them. This paradigm presents an alternative position to knowledge claims on either end of the spectrum; it allows the researcher to move between inductive and deductive reasoning and from subjective to objective viewpoints in performing a wide array of methods (25). However, Sandelowski suggests that the very rejection of this dichotomy enters into a constructivist paradigm, in that from this stance there is no hierarchy of methods whereby one technique is judged to yield better (more true/accurate) data than another (26).

My own paradigmatic position tends towards that of socially constructed knowledge claims: that the social world consists of multiple realities – products of human interaction that continuously adapt as their constructors change (27). From this angle, people make sense of the world from historical and social perspectives, scientific inquiry is always value-bound, and understanding how self (as researcher) and study participants are situated allows the researcher to interpret meanings of others through inductive reasoning (14). But the primary problem with this kind of knowledge claim is that, through its proclivity to disintegrate
boundaries between subject and object, the social world becomes tricky (if not impossible) to understand (28). Because all involved entities are constantly shaping each other, establishing cause and effect is not a feasible endeavor (25). Charlotte Aull Davies offers a way out of this dilemma through an integrative perspective that presents humans as neither passive results of social structures nor entirely their own authors, but instead as beings that mediate between these poles through constant feedback mechanisms. In conjunction with Mead’s ideas about self-formation that allows a researcher to genuinely know an “other,” this perspective lends support to James Clifford’s idea of partial truth (29). Put another way, it remains possible to study something as an object that exists in an external and changing social reality, but only if the researcher continually assesses her effects on that object (28). Referred to as reflexivity, such self-referencing practice allows a researcher to account for the active role she plays in constructing data and, as with the pragmatic paradigm, strike a balance between epistemological and methodological extremes.

Therefore, as employed reflexively, a concurrent mixed-methods study design is used to address the questions that drive this research and the above stated specific aims. This design attempts to capture the complexities inherent in the study topic by converging broad numeric trends with detailed local perspectives. For reasons of appropriateness and practicality, I initially selected a concurrent triangulation strategy that assigns equal priority to quantitative and qualitative study components. For these same reasons, however, the latter component ultimately became dominant in terms of the overall project. According to experts in mixed-method research, models of mixed-method studies fall into categories of concurrent or sequential designs. These groups are then further differentiated by whether they emphasize one methodological component over the other (“dominant-less dominant design”) or give
them equal weight ("equivalent status design") (14, 25). Of the six major models that vary according to these qualities, the concurrent triangulation design tends to be the most familiar. This design is used when a researcher conducts quantitative and qualitative methods simultaneously to triangulate the phenomenon of interest, or to compare and corroborate findings within a single time frame but from different angles or vantage points (14). Figure 1.1 presents a visual model of this approach.

Figure 1.1 Concurrent triangulation strategy, adapted from Creswell (14)

Most of the data for this study’s quantitative component are preliminary results of a population-based survey (Postpartum Interview Study) conducted by the U.S. Centers for Disease Control and Prevention in conjunction with the Ifakara Health Institute (IHI). These data are therefore considered secondary, along with a smaller amount of data used from the Ifakara Demographic Surveillance Site (DSS), part of the INDEPTH DSS Network. The only quantitative data in the study that are primary includes facility-level information that I collected as one of my fieldwork activities. However, all data in the qualitative component are considered primary, as my research assistant and myself produced this information with ethnographic methods including participant observation and in-depth interviews. Data from both components serve to depict the reality of biomedical obstetric care in the study setting.
Summary statistics describe the study population and logistic regression compares women using obstetric care with those not using it on social and material indicators. How and why relative positioning influences decisions and behavior around obstetric care are explored with ethnographic methods, which also contextualize the study. IRB approval for this research was obtained from the University of North Carolina-Chapel Hill, the Ifakara Health Institute (IHI), the Tanzania National Institute of Medical Research (NIMR), and the Tanzania Commission for Science and Technology (COSTECH).

Overview of Papers

This dissertation is structured according to a three-paper format, where the chapters that make up the main body are three stand-alone papers that will each be submitted separately for publication. These papers follow from the specific research aims stated above, where the first paper addresses the first aim, the second paper deals with the second and third aims, and the third paper takes on aim four while elaborating on aim three. Due to this reporting structure, the reader may notice some redundancy among the chapters, especially in introductory and methods sections. Despite this occasional overlap, each paper has a distinct focus and conveys its respective results with different compositions and narrative styles. Below is a brief overview of the papers that comprise the ensuing dissertation chapters.

The central tenet of the first paper is an argument for the need to better incorporate context in assessing biomedical obstetric care. An unanticipated result of trying to assess local obstetric services for the sake of defining this care (in order to operationalize it as a variable for statistical analyses), this paper considers the challenges of applying universal assessment schemes to the care that exists in particular localities – places each with unique histories, economic conditions, political climates, and sociocultural influences. First I review
the established schemes that researchers in maternal-newborn health use to conceptualize and assess obstetric care so it might be categorized as adequate or inadequate. I then employ facility data and ethnographic methods to describe the services that operated in the Kilombero Valley at the time of my fieldwork, as situated within national health policy and the wider political-economic climate. After illustrating how local actors with limited resources perform obstetric care, I compare this system to assessments that would be imposed on it by distant, transnational health organizations. Last, I discuss potential implications of neglecting context when categorizing obstetric care and suggest ways to improve current means of assessment so that they better account for the particular but still apply across a range of settings with similar characteristics.

The second paper combines statistical analysis and ethnographic insight to examine the role that social and material inequalities play in use of biomedical obstetric care. Taking a postmodernist feminist perspective, this paper emphasizes the idea that not all women in poor countries act and behave in similar ways when it comes to seeking and receiving care at childbirth. Instead, it shows how women, differentially positioned according to multiple markers of power, negotiate between deterrents and motivators to secure the best care they can. After providing summary statistics, I present results of a logistic regression model estimating the effects of this differential positioning (indicators of social and material status) on use of obstetric care. Interpretation of these results incorporates understandings from participant observation that were written up as ethnographic fieldnotes. Delving deeper into issues of access and use, I then review findings from in-depth interviews and participant observation in light of the regression results, organized by quadrants that correspond to type of care used as well as social and material positioning. This integration of methods is
elaborated on in the discussion section, as are my conclusions about the usefulness of mixed-method designs in comprehending complex human phenomena such as the impact of inequalities on health-related behaviors.

While the second paper looks at the effect of inequalities on use of and access to obstetric care, the third paper considers how decisions and actions related to this care influence women’s social and material positioning. It attempts to answer the question: how is inequality among women produced and embodied through the process of seeking and receiving care at childbirth? Drawing on theoretical concepts of embodied inequality, social exclusion, and identity, this paper reveals various pathways through which states of inequality are generated and subsequently incorporated within women’s bodies to be expressed as uneven health outcomes in populations. By way of Clifford Geertz’s “thick description” (30), I show that childbirth is a site of social exclusion and inclusion where processes of power negotiation, situated in macro and micro-contexts, make women vulnerable to a range of transformations that include social, emotional, and economic dimensions as well as the physical. Relative positioning within gender is then embodied, both in the decisions and actions that occur around this event as well as in a wider sense. Childbirth, or *kujifungua* in Swahili (literally, “to open oneself”), therefore presents women and families with a particular and unequal dilemma – a high stakes balancing of risks and benefits involving what is desirable, what is accessible, and how to navigate between these according to one’s standing in the social hierarchy.

Each of these papers has important implications for research, policy, and programs pertaining to maternal-newborn health. Each has methodological implications for the study of how inequalities affect action in diverse contexts. Each concludes with recommendations for
improving either the assessment or delivery of biomedical obstetric care. In particular, the second two papers provide suggestions for facilitating accessibility and acceptability of services explicitly among women who are socially and materially disadvantaged. Although knowledge generated by this project is most applicable to people in the Kilombero Valley, the findings and recommendations may also have relevance for populations beyond this context. After tying together the main results of the overall project, these potential implications are considered more thoroughly in the concluding chapter of the dissertation.
References


Chapter II. The Critical Need for Context in Assessing Biomedical Obstetric Care: A Case Study of Kilombero Valley, South-central Tanzania

Abstract

Organizations involved with maternal-newborn health are currently recommending two primary assessment schemes to measure, evaluate, and implement biomedical obstetric care throughout the world. A wide array of public health practitioners are using the concepts of skilled attendance and emergency obstetric care (EmOC) to determine the adequacy of obstetric services in poor countries – the goal being to improve upon these services, thereby reducing levels of maternal mortality and morbidity. Questioning such strong and uncritical reliance on these concepts, this paper considers challenges associated with applying universal assessment schemes to obstetric care in particular localities – places with unique histories, economic conditions, sociocultural influences, political climates, and systems of health care. Using quantitative indicators of health facilities combined with ethnographic data, I describe the specific childbirth services existing in a rural setting of south-central Tanzania (capacity and practice, policy trends, community-level resources, and access issues like medical pluralism and socioeconomic inequalities). I then consider how well the established means of assessment reliably and validly captured this care as it was routinely performed in the study setting.

In my evaluation, the current assessment schemes did not practically or sufficiently incorporate the multi-faceted context of obstetric practice. Imposing vague and reductive criteria on the shifting circumstances and improvised arrangements of local obstetric services did not result in assessment that was especially accurate, dependable, or meaningful. This is
an important finding, because how well biomedical obstetric care is understood in a particular place can affect how competently it will be measured, monitored, and improved upon there. Neglecting context in assessment of obstetric care can lead to faulty assumptions about quality and misinterpretations regarding actual deficits and opportunities. However, reshaping current schemes so they more effectively include context could facilitate interventions that are both appropriate and adequate – providing researchers, policy makers, and program managers with the information to imagine potential strategies in light of local realities. Investing in ways to assess obstetric care that better account for particularities of context is an effort likely to pay off in the long term.

Introduction

This paper is the unintended result of attempting to assess biomedical obstetric services in a rural part of south-central Tanzania. The aim of my original project was to explore women’s use of skilled attendance at childbirth by combining in-depth ethnographic methods with quantitative survey analysis. Skilled attendance, a conceptual scheme for assessing adequacy of obstetric care in relatively poor countries, was chosen because of the widespread use of one of its components. Proportion of deliveries with “skilled attendants” is a primary indicator of progress toward the fifth Millennium Development Goal (MDG-5) – a three-fourths reduction in global maternal mortality by the year 2015. Shortly into fieldwork, however, it became clear that categorizing existing childbirth services in terms of skilled attendance was going to be at once more difficult and less precise than anticipated. Not giving up, I turned to another assessment tool commonly used to evaluate and monitor obstetric services. I tried applying standards of emergency obstetric care (EmOC) to the situation. Although the criteria for this scheme proved more straightforward than the criteria
for skilled attendance, they still did not fit the services I was observing. Squaring the reality of obstetric care in the study setting with either of these means of assessment posed problems that I could not readily resolve.

In planning this project, I took for granted the established schemes for assessing biomedical obstetric services. I assumed they would provide an accurate representation of the adequacy of obstetric care in an uncomplicated manner. As it turned out, making sense of the care that existed in my field site and categorizing it as adequate or inadequate was anything but simple. Some obstetric services that qualified as adequate by the criteria I was using were severely undermined by factors not included in these schemes. Other services deemed inadequate had developed unique improvisations that, to some degree, compensated for designated shortcomings and thus continued to save women’s lives. Therefore, the task of assessing and categorizing obstetric care became an intricate process of pivotal importance (and ongoing frustration) that raised key questions of its own. Are universal assessment schemes valid and reliable ways of determining what obstetric services count as adequate in a particular locality? And even if they are, do these means of assessment enable an interpretation that sufficiently accounts for context, thereby facilitating intervention that is effective and appropriate?

Global consortia concerned with maternal-newborn health are recommending these assessment schemes (or some aspect of them) to measure, evaluate, and implement biomedical obstetric care throughout the world. Researchers, policy-makers, and program managers are using skilled attendance and EmOC to establish baselines, monitor progress, and improve availability of services. The purpose of this paper is to question this reliance on these assessment schemes by looking at how well they actually captured the adequacy of
obstetric care as it was routinely performed in a particular time and place. It seeks to define obstetric care in context and then evaluate its day-to-day practice in light of the schemes presently used to assess and categorize this service. The goal is not to denounce these concepts and tools, but rather to describe the ways they worked and didn’t work in real, on the ground circumstances and to think about what this might mean for current efforts in maternal-newborn health.

To provide some background, I will first summarize the ways that global health organizations conceptualize and assess biomedical obstetric care. Predominant schemes will be characterized, pointing to how they overlap and where they diverge. I will then describe the current system of obstetric care in the Kilombero Valley of south-central Tanzania. Situating this system within national health policy and the wider political-economic climate, I will illustrate how local actors with limited resources produce obstetric care and then look at how well this system matches up with assessments that would be imposed on it by distant global health organizations. Finally, I will discuss potential implications that neglecting context in assessing obstetric care might have for research, policy, programs, and perhaps life or death outcomes. Suggestions will be made for improving assessment schemes so that they better account for the particular but might still apply to a range of settings.

A note on terminology might be useful before proceeding. The term “biomedicine” refers to the western system of medicine that became globally dominant in the 20th century. Although a number of descriptive labels might apply to this system (i.e. allopathic, scientific, cosmopolitan, and modern medicine), the majority of medical anthropologists distinguish it as biomedicine (1). The term “biomedical obstetric care,” therefore, refers to biomedicine dealing with pregnancy, childbirth, and the recuperative period after delivery. Throughout
this paper, biomedical obstetric care indicates only the care provided during childbirth (the intrapartum and immediate postpartum periods) and does not include antenatal or later postpartum care. It is used interchangeably with obstetric care and obstetric services; although the basic Latin meaning of “obstetric” is “one who stands opposite” or “midwife” (2), the term originates from western medical practice and typically alludes to biomedicine. More general medical care for women giving birth, including the services of “indigenous” midwives or “traditional” healers, is referred to as childbirth care or childbirth services.

Background

The inception of the global Safe Motherhood Initiative in 1987 sparked over two decades of considerable effort to reduce death and disability from pregnancy-related complications. Despite this effort, estimates of maternal-newborn mortality and morbidity are still extremely high in many poor countries, especially those in sub-Saharan Africa (3). The prevailing view of the Partnership for Safe Motherhood and Newborn Health (PSMNH) is that making biomedical obstetric care available to all women is necessary to reduce these estimates. Whether provided in small clinics or large facilities, this care must supply basic obstetric services and also have the capacity to refer or handle emergency complications (4). The rationale for focusing on obstetric care is threefold. First, most complications leading to poor outcomes cannot be reliably predicted or prevented and their timing tends to fall during labor, delivery, and the immediate postpartum period (5, 6). Second, the majority of these complications are amenable to biomedical treatment; although not commonly predictable or preventable, most are treatable (7, 8). Third, historical analyses of industrialized nations and ecologic evaluations of countries with recent declines in maternal mortality indicate that this tactic can achieve results (9-12).
This emphasis on biomedical obstetric care is not without its critics. Many researchers question the use of historical and ecological data to merit a singular focus on obstetric services. Despite its intuitive appeal, they argue that the justification for this idea is based on quasi-experimental, non-causal studies that make it more theoretical than evidence-based (13, 14). Some caution that declines in maternal deaths occur alongside demographic, political, economic, and sociocultural developments – the effects of which should not be discounted, even though difficult to isolate and modify (10, 12, 15). Others conclude that, even though availability of obstetric care may be a key factor, disentangling the specific aspects of it that lead to declines proves troublesome (7, 16, 17). Beyond problems with the evidence base, additional concerns include: feasibility in poor countries due to the need for a functional health care system (13, 14, 18); neglect of community-based approaches like family planning, micronutrient supplements, infectious disease treatment, and traditional birth attendant (TBA) training (19-23); potential for an “over-medicalization” of childbirth (12, 24, 25); and evidence that this care is not reaching the poor (20, 26-28).

Despite these issues (and after significant debate), the consensus in global maternal-newborn health is that making biomedical obstetric care available to all women should be given priority (8, 29). So at this point the question becomes, how? Should this care be operationalized as a vertical intervention or should it be an integrative part of health systems reform? Should it be rolled out as first-level care in local communities or should the timing favor referral-level facilities? Should it rely on doctors, midwives, or some other cadre of health professional? And how should it be measured and monitored? What kind and what extent of care should be considered adequate? As hard as it is to sort out the evidence on effectiveness of biomedical obstetric care, even less is known about how to assess and
implement it – especially in settings with high maternal mortality and weak health care systems (30).

Advocates and researchers of maternal-newborn health have come up with a number of ways to categorize obstetric care so it might be assessed, implemented, and improved in resource-poor settings. These efforts have introduced a variety of ideas and acronyms into the policy arena of maternal-newborn health over the past 10 years, including skilled attendance, skilled attendants, skilled and/or professional care at childbirth, essential obstetric care (EOC), emergency obstetric care (EmOC), unmet obstetric need (UON), and the health-center intrapartum care strategy (HCICS). Lack of clarity and distinction between some of these may now be further confusing the issues, making it difficult to form coherent plans of action (8). Nevertheless, the two concepts of skilled attendance and EmOC have emerged as primary schemes for assessing biomedical obstetric care and for increasing its availability in poor and transitional countries.

The concept of skilled attendance is defined as “the process by which a woman is provided with adequate care during labor, delivery, and the early postpartum period” ((31), p.11). This process requires two components – a skilled attendant and an enabling environment. Skilled attendants are accredited health professionals (doctors, midwives, and nurses) trained to manage normal deliveries and either treat or refer obstetric and newborn complications (32). The numerous skills and competencies needed by these providers are specified in organizational and academic documents (10, 32). In contrast, the enabling environment is more ambiguous with no popular lists defining its qualities. It generally refers to the physical space in which delivery occurs and the technical supports available there, such as equipment, drugs, and referral and transport systems (31).
As mentioned above, the first component of skilled attendance is now a well-known assessor of obstetric care; proportion of deliveries with a skilled attendant is one of two indicators for progress towards MDG-5. In operation, however, the concept as a whole is not as popular. In 2001, Graham and colleagues presented a schematic framework for skilled attendance (10), which was later adapted into an assessment tool for developing strategies to monitor and improve obstetric services (33). Within this tool is the Skilled Attendance Index (SAI), a measure of the degree to which skilled attendance is provided in a facility or district (34, 35). Although the SAI is the only composite assessment of skilled attendance available, its use appears uncommon. This may be partially attributable to time and resource allotments needed to conduct the assessment in its entirety (33). Whatever the case, the use of this concept largely comes down to categorizing obstetric providers by their professional title.

Emergency obstetric care (EmOC) was originally conceived as a package of facility-level interventions required to treat the most common obstetric complications (11). This concept is now widely used to conduct needs assessments and monitor progress toward safe motherhood and newborn health goals (36). EmOC categorizes biomedical obstetric care into two levels according to what “signal functions” facilities provide. Table 1.1 presents the signal functions that facilities must have in order to qualify as having either basic emergency obstetric care (BEmOC) or comprehensive emergency obstetric care (CEmOC). A facility’s capacity to perform neonatal resuscitation with bag and mask is a relatively recent addition. The recommended level to ensure minimal coverage of EmOC in a given population is five qualifying facilities per 500,000 people, at least one of which must provide CEmOC (36, 37).
Table 1.1 Signal functions of emergency obstetric care (37)

<table>
<thead>
<tr>
<th></th>
<th>BEmOC</th>
<th>CEmOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parenteral antibiotics</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Parenteral oxytocics</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Parenteral anticonvulsants</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Manual removal of placenta</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Removal of retained placenta</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Assisted vaginal delivery (forceps or vacuum extraction)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Cesarean section</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Blood transfusion</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Neonatal resuscitation</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

These two conceptual schemes are overlapping but distinct. Each has an implied place within the other – EmOC fits suitably within the enabling environment of skilled attendance as back-up care, while the majority of providers performing EmOC signal functions can be assumed to be skilled attendants. However, the two are not the same. First, they have inherently different priorities that decide how, when, and where resources should be allocated. As a process, skilled attendance encompasses obstetric care provision from beginning to end – from first-level care based in communities through referral to higher-level care for management of complications should they arise (13). It assumes the normality of childbirth until proven otherwise, but responds with appropriate interventions if and when this occurs. EmOC, on the other hand, starts and ends with higher-level obstetric care in facilities, although in theory it extends outward to include the health care system and the promotion of accountability within it (38). This concept emphasizes the concern that every woman can develop complications in childbirth (assuming most of these cannot be handled in the community), so it’s better to start with scaling-up referral facilities and then consider first-level care.

The second difference between these schemes is the categories by which they assess adequacy of biomedical obstetric care. The required competencies for skilled attendants
entail a broad set of skills and abilities in which these providers must be proficient. These range from psychosocial support and cultural sensitivity to first-line management of hemorrhage and hypertension (10, 32, 35). There are no set standards for the enabling environment. In contrast, EmOC uses just nine clinical criteria specific to the facility being evaluated, versus the personnel providing services. Although the EmOC Needs Assessment Tool collects more detailed information on these signal functions and general facility capacity (i.e. infrastructure, staffing, transport), obstetric care is fundamentally assessed according to these indicators (39). It is clear that the categories of both assessment schemes reflect the respective priorities of their conceptual roots.

In the study and work of global maternal-infant health, there may be a valid need to establish universal standards of adequacy in obstetric care. But there is also a need to develop standards of appropriateness that account for context. Medical anthropologist Carolyn Sargent contends that biomedicine is not a monolith (40). Echoing this idea, Van Hollen argues that biomedicalization of childbirth is not a monolithic process, either within or across national boundaries. According to this author, there is no single standard of biomedical obstetric care that remains fixed and static once transplanted to a new locality – overcoming all historical, political, economic, and sociocultural forces. Rather, like any system of medicine, this care is a fluid entity that emerges locally – not only in shaping local perceptions and experiences of childbirth but also in being transformed by these itself, taking on unique contours that mirror the understandings of actors in a particular time and place (41). Brigitte Jordan’s *Birth in Four Cultures* demonstrates this process in industrialized countries by contrasting models of biomedical obstetric care in the U.S., Sweden, and Holland (42). Other anthropologists studying childbirth and reproduction describe it in a
variety of non-western settings (40, 41, 43-47). Therefore, however obstetric care might be clumped into broad categories for assessment purposes, significant differences exist in what this care consists of, how it is produced, and what it means.

To varying extents, both assessment schemes acknowledge that wider, place-specific conditions matter in the delivery of obstetric services. Skilled attendance attempts to account for these in the reach of its components; the skilled attendant embodies abilities ranging from the interpersonal to the clinical and the enabling environment can be extended beyond physical and technical aspects to include political climate, social influences, and health system factors (10). In addition, emphasizing care that is close to women’s homes may coincide with local economic realities and expectations for childbirth. At the same time, EmOC recognizes broader conditions insofar as its signal functions accurately represent the larger health care system in which a facility operates.

But despite such allowances, the current means of assessment do not practically or sufficiently incorporate the multi-faceted context of obstetric practice. Both make assumptions about access and quality, and neither include the perspectives of the people giving care or those intended to receive it. There is also a general neglect of the wider, ever-changing social and economic conditions that give rise to the specific constraints and possibilities that determine this practice. The key point is this: how well biomedical obstetric care is understood in a given setting can affect how competently it will be measured, monitored, and improved upon in that place. The following section illustrates the difficulties with universal assessment through a look at obstetric care as it is practiced in a particular locality and shaped by a particular context.
Case Study

Situating obstetric care in the study setting

The Kilombero Valley is located in the Morogoro Region of south-central Tanzania, bordered by the Selous Game Reserve to the east and Udzungwa Mountains to the northwest. It is primarily rural and its geography consists of African savannah with alternating dry and rainy climates throughout the year. The impressive Kilombero River churns along the valley floor, providing irrigation for rice paddies and marking the political boundary between its two adjacent districts – Kilombero and Ulanga. The study setting comprises 25 villages within these districts that make up the Ifakara Demographic Surveillance Site (DSS). This particular DSS, an INDEPTH site administrated by the Ifakara Health Institute (IHI), routinely collects data on pregnancies, births, deaths, migrations, and specific health-related events.

At present, the population of these villages totals 94,000 people living in 20,000 households and scattered over 1,440 km² in the Kilombero District and 1,000 km² in Ulanga (48). The inhabitants of this area are ethnically diverse, representing dominant groups of Pogoro, Bena, Ndamba, Hehe, and Nyakyusa as well as smaller semi-nomadic groups of Sukuma and Maasai. The population is also diverse in regards to religion; Christian, Muslim, and indigenous practices are prevalent throughout. Agriculture (subsistence and cash crop), fishing, and petty trading form the basis upon which most people earn their livelihoods. Even apart from semi-nomadic groups, the population is highly mobile; members of most families travel to shamba (farms with second homes) for weeks at a time during the long rains. Some residents also migrate to urban areas for regular wage work. The fertility rate is most recently estimated at 5.3 births per woman and the maternal mortality ratio at 500 deaths per 100,000
live births. Approximately 49% of all pregnancy outcomes occur at home while 51% take place in facilities (48). A varied network of government and mission facilities serves this population, including two district hospitals, two health centers, and 11 dispensaries. However, these latter statistics don’t tell the whole story with regards to obstetric care. In order to grasp a more complete picture, it is useful to situate these services within their context, both broader and more specific.

During German and British colonial rule (1880s-1961), mission health posts and government facilities provided a limited amount of maternal care to indigenous populations in Tanganyika (49, 50). Public maternal and child health services after independence were initiated in 1974, bolstered by a strong primary health care program under President Nyerere. This program deteriorated throughout the 1980s, however, due to a diversion of health funds to the economic sector and inadequate maintenance of facilities. Renewed financial commitment to public health did not occur until the post-structural adjustment period of the late-1990s, when an economic reform plan designed to halt the decline was enacted (51). By this time Tanzania had adopted the Safe Motherhood Initiative and created a Reproductive and Child Health (RCH) Section within the Ministry of Health. These political commitments were largely a response to agendas being promoted by women’s health and rights advocates, such as those voiced at the 1987 Safe Motherhood Initiative launch in Nairobi and the 1994 International Conference for Population and Development (ICPD) in Cairo. The present decade’s climate of decentralization has seen more specific attempts to address maternal-newborn health through a number of federal policies and programs partnered with private organizations (52).
The latest attempt is a coalition of government programs and donor agencies called the Tanzania Maternal, Newborn, and Child Health (MNCH) Partnership. This coalition has issued a National Road Map Strategic Plan to Accelerate the Reduction of Maternal and Newborn Mortality for 2008-2015. Besides specifying inputs, this document sets the 2015 target level for proportion of deliveries with a skilled attendant at 80% and the level of health centers and hospitals with EmOC at 100%. However, it also notes that the RCH budget is limited by competing priorities like malaria and HIV/AIDS and therefore unable to finance sweeping interventions (52). Tables 1.2 and 1.3 present recent estimates and indicators of maternal-newborn health and obstetric care. Maternal-newborn services that are implemented will be done so through the country’s pyramidal health system that employs RCH supervisors at national, regional, and district levels and distributes care in public, parastatal, and private or faith-based facilities. Some of these facilities are hospitals or health centers but most are rural dispensaries.

Table 1.2 Relevant demographic estimates and use of obstetric services in Tanzania

<table>
<thead>
<tr>
<th></th>
<th>1999*</th>
<th>2005**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total fertility rate (sum of age-specific, single-year rates)</td>
<td>5.6 total</td>
<td>5.7 total</td>
</tr>
<tr>
<td></td>
<td>6.5 rural</td>
<td>6.5 rural</td>
</tr>
<tr>
<td>Maternal mortality ratio (deaths per 100,000 live births)</td>
<td>529***</td>
<td>587</td>
</tr>
<tr>
<td>Neonatal mortality ratio (deaths per 1,000 live births)</td>
<td>51</td>
<td>36</td>
</tr>
<tr>
<td>Proportion of women delivering with skilled attendants (%)</td>
<td>44</td>
<td>46</td>
</tr>
<tr>
<td>Proportion of women delivering at health facilities (%)</td>
<td>44</td>
<td>47</td>
</tr>
<tr>
<td>Proportion of women with at least one ANC visit (%)</td>
<td>98</td>
<td>97</td>
</tr>
</tbody>
</table>

*Tanzania Demographic and Health Survey 1999 (53)
**Tanzania Reproductive and Health Survey 2005 (54)
***Tanzania Demographic and Health Survey 1996 (55)
Lastly, obstetric care in the study setting also has links that situate it within the wider world. As a former colony in Anglophone East Africa, a socialist state during the Cold War, and now an emerging capitalist democracy, Tanzania is subject to a particular history and positioning that keeps it closely tied to global power structures – especially ongoing dependence on foreign aid. This positioning and these ties deeply affect the country’s ability to provide health care for its citizens today. In the Kilombero Valley, they are manifested in the hodgepodge of public and mission health facilities, the inconsistency of infrastructure and supplies, the jumble of foreign aid projects and foreign aid workers, the confusing array of provider types (with an even more confusing array of skills, responsibilities, and commitment levels), and the solutions improvised on a daily basis in the performance of obstetric care.

Describing obstetric care in the study setting

Practice of biomedical obstetric care in the Kilombero Valley, therefore, is continually affected by its unique positioning vis-à-vis wider connections to nation and
world. This effect takes place through proximate local factors that include village politics, economic realities, and sociocultural logics. It is this articulation between the global and the local that produces specific circumstances for how obstetric care in the study setting can be “done.” It also results in unique and dynamic ideas about how it should be done – both among practitioners and among patients. In regards to the relationship between macro and micro, Abu-Lughod explains that, “the effects of extralocal and long-term processes are only manifested locally and specifically, produced in the actions of individuals living their particular lives” ((58), p. 150). I will now describe the local and specific practice of obstetric care in the Kilombero Valley, followed by an attempt to assess this practice using predominant assessment frameworks.

Part of the data presented in this description derives from a survey of all facilities in the study setting, including staff interviews and medical record reviews for the previous six months. The other part comes from ethnographic participant observation, involving informal interactions, fieldnotes, and several days of clinical volunteer work in each facility. Tables 1.4 and 1.5 give some key characteristics of obstetric services from the facility survey. It should be noted that some indicators were omitted from the tables due to their relative homogeneity. For example, none of the facilities offered assisted vaginal delivery, and all had a policy to keep newborns warm, dry, and breastfed soon after birth. Also, both district hospitals had on-call physicians and performed cesarean sections, manual vacuum aspiration, dilation and curettage, and blood transfusions when a matching donor was available. However, no other facilities had these capacities. In terms of infrastructure, only hospitals and health centers (similar to dispensaries but with more staff and beds) had piped water; all dispensaries sourced their water from outdoor wells with pumps. Most facilities in the
Kilombero District but only four of nine in Ulanga had access to electricity. Regardless, unless the facility had a private generator (district hospitals and mission facilities), this access was extremely limited.

The tables show a high degree of variation across service indicators. St. Francis, the district hospital of Kilombero, conducted twice as many deliveries as Mahenge, the district hospital of Ulanga. Officially a parastatal entity but operating more as a private mission facility, St. Francis is centrally located in Ifakara Town near the district border. It is technically outside of the study setting but serves rural residents of both districts and offers the most advanced care in the valley (for example, it is the only facility with neonatal resuscitation). In comparison, Mahenge is a government hospital remote to most villages with less reliable services. Number of deliveries in non-hospital facilities also varied widely, where 10% to 50% of laboring women were referred for higher-level care. In terms of staff, hospital delivery attendants included physicians, interns, advanced medical officers (AMOs), nurse-midwives, nurses, RCH aides, and at times also housekeeping personnel. In health centers and dispensaries, attendants were clinical or rural health officers, nurse-midwives, or some type of health aide. Besides the myriad of possibilities for training and work duties, staff availability was inconsistent. Providers in hospitals and health centers were accessible 24 hours, while in dispensaries the chances of finding one after four p.m. were hit or miss. Finally, there was also variation in service capacity, especially with respect to use of partographs and skills involving placental management.
### Table 1.4 Select characteristics of obstetric services by health facilities in the study setting (Kilombero District)

<table>
<thead>
<tr>
<th>Facility type</th>
<th>Hospital</th>
<th>Health Center</th>
<th>Dispensary #1</th>
<th>Dispensary #2</th>
<th>Dispensary #3</th>
<th>Dispensary #4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility type</td>
<td>Mission/parastatal</td>
<td>Public</td>
<td>Public</td>
<td>Public</td>
<td>Public</td>
<td>Mission</td>
</tr>
<tr>
<td>Average births/month</td>
<td>280</td>
<td>32</td>
<td>10</td>
<td>36</td>
<td>44</td>
<td>5</td>
</tr>
<tr>
<td>Average referrals/month</td>
<td>N/A</td>
<td>8</td>
<td>10</td>
<td>10</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Clinical or rural health officer</td>
<td>(Physician)</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Nurse-midwife</td>
<td>1-2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Health aide (RCH or other)</td>
<td>1-2</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Parenteral antibiotics</td>
<td>Yes</td>
<td>Occasional</td>
<td>No</td>
<td>No</td>
<td>Occasional</td>
<td>No</td>
</tr>
<tr>
<td>Parenteral oxytocin</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Parenteral ergometrine</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Parenteral anticonvulsants</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Use of partograph</td>
<td>Yes</td>
<td>Yes</td>
<td>Occasional</td>
<td>Occasional</td>
<td>Occasional</td>
<td>Yes</td>
</tr>
<tr>
<td>Manual removal of placenta</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Removal of retained products</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Transport to/from facilities</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Support for home delivery</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Official user fees</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Table 1.5 Select characteristics of obstetric services by health facilities in the study setting (Ulanga District)

<table>
<thead>
<tr>
<th>Facility type</th>
<th>Hospital</th>
<th>Health Center</th>
<th>Dispensary #1</th>
<th>Dispensary #2</th>
<th>Dispensary #3</th>
<th>Dispensary #4</th>
<th>Dispensary #5</th>
<th>Dispensary #6</th>
<th>Dispensary #7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility type</td>
<td>Public</td>
<td>Public</td>
<td>Public</td>
<td>Public</td>
<td>Public</td>
<td>Public</td>
<td>Public</td>
<td>Mission</td>
<td>Mission</td>
</tr>
<tr>
<td>Average births/month</td>
<td>140</td>
<td>40</td>
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<td>24</td>
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<td>6</td>
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<td>Average referrals/month</td>
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<td>4</td>
<td>8</td>
<td>6</td>
<td>2</td>
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<td>(Physician)</td>
<td>2</td>
<td>2</td>
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<td>1</td>
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<td>4</td>
<td>3</td>
<td>3</td>
<td>2</td>
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<td>0</td>
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<td>Yes</td>
<td>No</td>
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<td>Occasional</td>
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<td>No</td>
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<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
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</tr>
<tr>
<td>Removal of retained products</td>
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<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
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<td>Transport to/from facilities</td>
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<td>No</td>
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<td>No</td>
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<td>Support for home delivery</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<td>Yes</td>
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Despite the variation in services, the tables also indicate some general patterns. First, hospitals were the only facilities routinely offering parenteral antibiotics, anticonvulsants, and oxytocin. While no non-hospital facilities had oxytocin, all but two used intramuscular ergometrine to control postpartum hemorrhage. None of the facilities used misoprostil. Second, all hospitals and health centers had an ambulance for patient transport but only one dispensary (a mission facility) had a vehicle that could be used for this purpose. Third, support for home deliveries in the form of TBA collaboration occurred exclusively in dispensaries. RCH policy at the district level categorically discouraged home births but the frequency of this event made interaction between TBAs and facility providers unavoidable. Last, user fees for delivery existed in all mission facilities but only two of eleven public facilities officially charged for this service.

Qualitative data allow for a deeper understanding of problems suggested by these tables. To start, poor access to electricity and clean water created substantial difficulties. Such infrastructure failures tended to be greater in Ulanga District than Kilombero, which has more fertile land and thus more commercial farming, migration, and private non-governmental organization (NGO) projects than its counterpart. However, providers in non-hospital facilities of both districts were often forced to conduct deliveries by candlelight and walk nearly 30 minutes to collect water. Transportation to and between facilities was another fundamental problem. For the few facilities that had vehicles, availability was highly unreliable and the fees for petrol were out of reach for most villagers. Transport was also hampered by extremely poor road conditions. During rainy seasons, the roads that connected health centers and dispensaries with larger hospitals were intermittently impassable and some villages were cut off from services entirely.
In accordance with national data, facilities suffered a severe shortage of basic supplies. Obstetric providers in public facilities routinely instructed women to bring a number of items with them for delivery: gloves, clean razors, cord ties, cotton wool, a basin, and three to five pieces of *kanga* (a colorful cloth used to wrap the baby, clothe the mother, and clean up after delivery). In some dispensaries women were required to bring a liter of kerosene and disinfectant solution as well. One nurse-midwife told me that before this “policy” was enacted, she had to conduct deliveries with condoms on her hands. To clarify, requiring women to bring their own delivery supplies was not an official RCH policy but instead appears to be an improvised offshoot of a recent protocol to establish a birth plan with women as part of WHO’s Focused Antenatal Care package. Meanwhile, availability of obstetric drugs was also lacking, where even the stock of oral antibiotics was unstable. Providers in all facilities ordered supplies and medications from the Medical Stores Department (MSD), a department of the Ministry of Health that aims to “make available at all times essential drugs and medical supplies of acceptable quality at cost-effective prices to the population” (59). However, RCH supervisors reported significant inefficiencies in this organization, including orders delivered up to six months late (or not at all) and supplies of insufficient quantity and unacceptable quality.

As noted above, obstetric care in the Kilombero Valley involved a large assortment of providers working in under different circumstances in different facilities. The training of these providers was highly manifold, ranging from formal training in government programs to a less formal education that mostly took place on the job (health officers and aides). The result in non-hospital facilities was that some providers were comfortable conducting normal deliveries and managing minor complications while others referred as many women as
possible to higher-level care. Even in hospitals, provider skills and knowledge contradicted what might be expected of a given cadre; physicians were not necessarily more capable than AMOs and most aides could manage childbirth as well as nurse-midwives, who were far more skilled than interns. Physicians, interns, and AMOs worked on an on-call basis typified by unpredictable response times. Nurse-midwives and aides were always on duty but often taking tea. Providers in health centers and dispensaries usually resided next to the facility, either in government housing or within the mission home. However, it cannot be inferred that they were available 24 hours; in facilities with staff shortages it was not unusual for a woman to turn up for delivery only to have to send her relatives off to find the missing provider.

Beyond basic service factors, the complicating issue of medical pluralism also colored obstetric practice. Medical pluralism is the coexistence of an array of medical systems that compete or cooperate with one another in a given society (1). Here it refers to the crossover of biomedical obstetric services with folk medicine and witchcraft, still prevalent in the work of community-sanctioned TBAs and practitioners of indigenous medicine. This crossover, in which medical systems are not mutually exclusive, may help alleviate access-related problems. For example, some TBAs (trained and untrained) worked closely with dispensaries in reporting home births, referring women with complications, and even conducting deliveries there when needed. At the same time, a small but growing number of nurse-midwives were independently forming home birth businesses – another improvised strategy that occurred despite public authorities’ frown on domiciliary delivery. But while coexisting medical systems could be cooperative, they could also undermine each other in diagnosing and treating obstetric complications. For example, at times symptoms such as heavy bleeding or long labor were traced to extramarital relations or the curse of a
jealous neighbor as opposed to uterine atony or fetal-pelvic disproportion (but because families and TBAs accepted etiologies from diverse systems simultaneously, they frequently pursued a range of treatments that included facility services). It could also go other way; just as some TBAs encouraged women to seek care at a facility, some biomedical providers advised relatives to consult a witchdoctor on behalf of their laboring family member.

Finally, social and material inequalities were deeply implicated in the performance of obstetric care. In agreement with evidence provided by Gwatkin and colleagues (27), this issue strongly affected women’s access to and use of obstetric services. But beyond demand-side factors such as travel and opportunity costs, some aspects were located on the side of service supply and delivery. From Tables 1.4 and 1.5, it appears user fees apply mostly to private facilities, a finding consistent with the 2006 Tanzania Service Provision Assessment Survey (54). In reality, unofficial fees at the end of pregnancy plagued many families in these villages, making access to care especially difficult for women who were relatively poor. One of these fees was asante, a payment given to the birth attendant that literally translates as “thank you.” Unlike most gestures of thanks, however, this one wasn’t always voluntary; many providers in public dispensaries demanded a monetary tip for “helping” with a service that is free according to RCH policy. Another expense consisted of the items women were instructed to bring to public facilities, collectively known as vifaa and often purchased at provider-owned pharmacies. In short, women who couldn’t afford to pay asante or bring vifaa frequently had to choose between delivering at home or facing demeaning, neglectful treatment from facility providers. The multiple effects of inequalities on access to services are not explored in detail here, but they must be recognized as an integral part of obstetric practice in the study setting.
Assessing obstetric care in the study setting

This section demonstrates my attempt to apply the current schemes for assessing biomedical obstetric care to the system of services described above. Which delivery attendants in the study setting are skilled? Are their environments enabling? Which facilities qualify as having EmOC? What coverage is provided by the services that may or may not fall into these categories? Could a continuum be more representative than dichotomous classification? These questions will now be considered, followed by a discussion of what their answers might mean for assessing obstetric care in the Kilombero Valley and beyond.

To review, skilled attendants are health care professionals trained to manage normal deliveries, diagnose complications, and treat or refer these to higher-level care. Often clumped into a single group, designation of “professional” is usually limited to doctors, nurse-midwives, and nurses. However, a result of the messy process of development, this category in the study setting was not so tidy. Due to problems with health education, inadequate supervision, and habituated practice, trained professionals with these titles didn’t necessarily possess or perform the skills that would qualify them as skilled attendants. This discrepancy has been reported in other contexts; a study evaluating these criteria among health professionals in Benin, Ecuador, Jamaica, and Rwanda found a wide gap between training and the extent of skills and knowledge (60). At the same time, some providers who were trained but not professional (including TBAs) practiced skilled care everyday. I saw RCH aides expertly conduct breech deliveries and manage retained placenta just as I observed professional providers flounder with hemorrhage and even uncomplicated births. Either way, the exhaustive criteria made evaluating this status troublesome. Not surprisingly, most village women were generally unaware of the type, title, and clinical abilities of their
providers. Systematically working out which attendants were skilled and which were not proved just as difficult for me.

Perhaps even more challenging was establishing what environments with obstetric services count as enabling. The first problem involved whether to assign this quality to individual venues or to the environment as a whole. Assuming the former (for want of a starting point), the next question was whether the most intimate birthplace, the home, could be enabling. Graham, et al. report discrepancies around this issue in global maternal health documents (10). The absence of a clear answer on the potential for homes to be obstetrically enabling leaves this question unresolved. For health facilities, the problem boiled down to qualifying technical supports. Lack of basic supplies and transport severely restricted the enabling-ness of health centers and dispensaries. However, these facilities accrued some of this quality when women brought supplies themselves, and still more if ergometrine happened to be in stock or if the ambulance was working that day. So then, at what point are conditions enabling *enough*? Last, it was unclear whether (and how) this component is meant to incorporate wider socio-political factors, such as government commitment to maternal health or women’s expectations for childbirth. This inclusion may be an effort to theoretically incorporate context, but it is far too ambiguous to be practical.

Taking these components together, determining what skilled attendance is and is not in the study setting was a complicated endeavor. To what extent skilled attendance exists is not a fixed entity, but rather something that fluctuates with changing conditions. As such, it is necessary to measure this “process” on a detailed case-by-case basis (a task not feasible for many projects). But even if the necessary time and resource allotments were available, the extent to which this framework would reflect the actual process of being provided with care

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is still debatable. Even assuming that both components were precise and unambiguous, what to make of skilled attendants outside enabling environments and enabling environments without skilled attendants? A strict interpretation would altogether bar these services from being considered skilled attendance (and thus adequate care), despite the fact that they might still provide women with a critical degree of safety. In this study setting, such a scenario did not seem unusual – but it would depend on how each component was measured.

Assessing obstetric services for EmOC was little more successful, primarily because no facilities in the study setting qualified. Two signal functions of BEmOC are assisted vaginal delivery and neonatal resuscitation. The former was not offered at any facility and the latter was only available at St. Francis. Even excluding these criteria, health centers and dispensaries still didn’t meet minimum requirements – none of them had a regular supply of parenteral antibiotics or anticonvulsants. Yet some routinely provided many life-saving and supportive services. For example, both hospitals had requisite parenteral drugs and could perform CEmOC functions of uterine evacuation, cesarean section, and blood transfusion. Parenteral ergometrine was available at 85% of health centers and dispensaries, and 70% of these performed placental removal. This said, it should not be assumed that existing EmOC services were indicative of good practice. Quality-related issues contributed to clinical mismanagement (i.e. inappropriate use of oxytocics, 30% cesarean section rates) and women highly dissatisfied with their care. It also can not be assumed that those in need of EmOC were the ones getting it; women receiving care in hospitals usually had socioeconomic resources but not necessarily obstetric complications.

Besides applying these assessment schemes to discrete facilities, it is also important to look at what they indicate about obstetric care coverage for the population. Most women
delivering at home were attended by an unprofessional provider in a questionably enabling environment, and were therefore not likely to have skilled attendance. Women in facilities could be attended by a skilled or unskilled provider who did or did not qualify as professional in an environment that may or may not have been enabling. Whether these women had skilled attendance depends on who attended the birth, what skills they employed, and what technical (social/political?) supports were available the day they delivered. EmOC coverage was technically nil per 94,000 people – or at most, one CEmOC facility minus assisted vaginal delivery, one CEmOC facility minus assisted delivery and neonatal resuscitation, and no BEmOC facilities. Neither assessment scheme addressed which women were covered in terms of social and material status, although United Nations process indicators for EmOC include a measure of who is using this service in relation to obstetric need (37).

On the whole, my attempt to apply universal fixed assessment schemes to biomedical obstetric care in the Kilombero Valley created more confusion than clarity. In this setting, imposing vague or reductive criteria on the shifting circumstances and improvised arrangements of local obstetric care did not result in assessments that were especially accurate, dependable, or meaningful. Like Bloom and Lucas’s description of the emerging pluralistic health care market in sub-Saharan Africa, the reality consists of a diverse range of providers offering a spectrum of unregulated services, for which users pay a combination of fees and informal charges while obtaining drugs and medical items from a wide variety of public and private sources (61).

Discussion

This case indicates that the practice of biomedical obstetric care is highly dependent on the context in which it operates. Context – broad and situating, local and particular,
constantly changing – is inextricably woven into what obstetric care consists of and how it is performed. The case also shows how current means of assessing this care do not sufficiently account for this determinant. Transnational organizations working to improve maternal-newborn health understandably want to define obstetric services as adequate (using simple, presumably easily measurable indicators) in order to establish baselines, monitor progress, and evaluate interventions. However, the pre-existing categories they now use are often taken for granted as a true reflection of obstetric care in settings across the globe. A closer look suggests otherwise. If incorporated, a strong grasp of context in a specific locality not only has the potential to define services validly, but can also help craft sustainable solutions that work with actual conditions. Neglect of context, however, can lead to assessments that conceal as much as they reveal, making them less useful than they might be. If assessments of obstetric care are to be well founded, the need for universality must be balanced with the competing need to recognize and incorporate context.

Specifically, attempting to assess obstetric care with established schemes can lead to problems in feasibility, validity, and reliability. Criteria for skilled attendance are either too cumbersome or too obscure to be of practical use in measurement. The skilled attendant component is imprecise when measured by provider title alone, as it is entirely possible that doctors, nurse-midwives, and nurses are giving care that is unskilled. Further, there is likely a high degree of inaccuracy on surveys collecting data from obstetric care users. A study on identifying obstetric professionals in Ghana found that women did not correctly distinguish between different types of providers, and that factors like multiple provider involvement and delivering alone in facilities add to the unreliability of this indicator (62). Conclusions about EmOC capacity are equally susceptible to error if they fail to account for qualifying facilities
that don’t provide adequate (and appropriate) emergency services and disqualifying facilities that do. Finally, in determining adequacy of obstetric services, neither scheme tells us anything about access to care or about the perspectives of women intended to receive it – central factors influencing use of facility-based services.

It follows that overly simplistic findings can have consequences for policies, programs, and evaluation. A number of indicators can evaluate different aspects of maternal-newborn services, such as measures of availability, use, and impact. However, if services are not well represented to begin with, these evaluations and their interpretations will also be off base. Going back to the skilled attendant component – if a facility survey finds that the proportion of health professionals attending deliveries is low, would it be beneficial to increase this number? Possibly, but only if the new providers are proficient and responsible, have the resources to perform their duties, and work in settings that actually need them. Without necessary supplies, quality management, and a professional climate that rewards committed non-discriminatory behavior, it could be a wasted undertaking. In a setting that has these functions but also has enough skilled providers who aren’t “professional,” a partial scale-up may suffice. Thus, due to limitations in the skilled attendant criteria and their measurement, it would be faulty to assume that pouring professional providers into a particular system will be an effective or efficient strategy. Similarly, if EmOC assessments aren’t interpreted in relation to how capacity is typically utilized, misplaced effort and resources can result from assessment tool as well.

Leaving out crucial details also creates potential for missed opportunities. For example, if the home environment cannot qualify as enabling, deliveries that occur there cannot qualify as skilled attendance. In Tanzania, a nation now undergoing decentralization,
this would include home births attended by independent nurse-midwives trying to establish private enterprises. What might be a potentially promising service could be squandered from lack of empirical assessment and financial investment. Instead, a majority of efforts would be directed at institutionalized care, a strategy not yet be feasible for all countries and one that would certainly not work for women who don’t deliver in facilities. Another overlooked opening involves the most appropriate roles for non-professional providers (including TBAs), which will exhibit considerable variation from setting to setting. Last, women’s own ideas about problems and solutions are not taken into consideration. Besides providing insight into making obstetric care more accessible, potential users’ perspectives suggest options to make it more acceptable. Yet only a few maternal health advocates emphasize the idea that improving the qualitative experience of giving birth in a given environment is likely to increase women’s presence in that setting (25, 63, 64).

So as they stand, the current assessment schemes produce information that may be misleading if not largely askew, missing the mark on real deficits and opportunities in a specific locality. How often this occurs and to what extent is contingent upon the particularities of the setting. Without knowledge of context, there is a risk of interpreting this information at face value and, as Roth Allen puts it, developing more “generic policies and programs in the belief that what works in one poor country is sure to work in another” ((46), p. 6). These policies and programs could hinder reduction of maternal mortality through faulty assumptions about quality of care. They could also contribute to a perpetuation of inequitable outcomes by omitting details on access and disparities, thus accommodating the needs of some women while excluding the needs of others. Bullough and colleagues claim that, regardless of whether or not there is good evidence, the value of a strategy is entirely
dependent upon the situation in which it is to be employed (13). When strategies are mostly informed by assessment schemes that underestimate this situation, their ability to resolve deficits and act on opportunities is severely compromised. On the other hand, assessments that attend to it enable a more realistic interpretation, facilitating action that is appropriate as well as adequate.

**Conclusion and Recommendations**

In response to *The Lancet* Maternal Survival Series, Costello, *et al.* published a commentary arguing for maternal-newborn health strategies that are context-specific, as opposed to what they view as a “one-size-fits-all” approach (18). In this paper I am arguing for context-specific assessment tools for obstetric services in poor and transitional countries – as opposed to those that reduce it to a generalized, substandard version of what exists in the West. In other words, I am calling for more relevant options that assist the user in understanding the multi-faceted practice of obstetrics in a particular setting and to imagine potential strategies in light of local realities. In an article defending the need to humanize birth in poor countries, Wagner asserts that we who work in maternal-newborn health have not yet been clever enough to take advantage of biomedical obstetrics while avoiding its disadvantages, such as “the drift to medical excesses” (25). So far, neither have we been clever or astute enough to recognize the need and then develop alternatives for assessing and categorizing biomedical obstetric care that account for context while allowing for a degree of application across time and space.

A re-shaping of the existing assessment schemes could produce an alternative that achieves this aim by producing a continuum of adequacy represented by degrees rather than dichotomous categories. Qualifying criteria might be changed, added to, or otherwise
transformed to reflect what I term “critical factors of context” – local practice, trends and resources, medical pluralism, and access inequalities. First, the details of locally practiced obstetric care must be systematically incorporated, fluid and unpredictable as these may be. Who is doing deliveries, what their abilities consist of, and in what conditions they exercise these skills must figure more accurately into provider assessment. What technical supports are available and how these are typically used must be organized in a way that minimizes ambiguity. Second, trends and resources for obstetric care need to be identified, including relevant policies, indicators of social and economic development, and community-level resources (facility committees, women’s groups, NGO programs, etc.). Third, assessment should encompass a basic understanding of how medical pluralism plays into childbirth. Knowing what other therapeutic systems are operating might help adapt biomedical care to social expectations. Lastly, inequalities in access to services must be added as a routine component. These measures should include women’s perspectives as well as those of family members with obstetric decision-making authority.

Incorporating such contextual factors will require a great deal of collaborative effort and the above suggestions are merely a starting point. Fleshed out, however, they could allow for more validity, reliability, flexibility, and comprehensiveness in assessment. Due to the quantity of information needed, working out how to best capture these factors will present challenges for data collection and analyses. Although it may demand more time and resources, I recommend a mixed-method approach that integrates quantitative and qualitative techniques. An example is the Skilled Attendance for Everyone (SAFE) tool, an expanded assessment of skilled attendance that uses population-based surveys and semi-structured interviews in evaluating obstetric care and developing strategies to improve it (33). Another
useful tool is WHO’s responsiveness index that scores health services on proxy indicators for accountability (65). Application of contextual assessment schemes could initially be tried in a sentinel surveillance site. While technically not representative outside their geographic area, these sites can still indicate durable processes in proximate areas. Through careful inference, nearby localities could be assessed with fewer resources and over time, a scale might be developed for use in an even wider range of settings. Although this process may be lengthy and require a considerable amount of resources up front, it is an investment that is likely to pay off in the long term.

Contrary to common assumptions, determining what biomedical obstetric services are adequate in a particular locality is a complex yet crucial undertaking. Simply thinking that all we need to do is increase the availability of skilled attendants and facilities with EmOC won’t take us very far without a deeper understanding of the local context of practice. Biomedical obstetric care is not a monolith, and generalized, universal standards of adequacy are not enough to determine either actual adequacy or appropriateness of this care. On the other hand, connecting the many factors that shape obstetric practice in a given setting will go a good distance towards facilitating interpretations that can enact real improvements. The aim is not to elaborate every nuance but to provide an understanding sufficient to inform effective, place-based policies and interventions. Regardless of exactly how this is accomplished, developing better ways to assess and categorize biomedical obstetric care is essential in, as Campbell and Graham put it in The Lancet Maternal Survival Series, “getting on with what works” (7).
References


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Chapter III. Use of Biomedical Obstetric Care in Rural Tanzania: A Mixed-method Approach to the Role of Social and Material Inequalities

Abstract

Complications of pregnancy and childbirth continue to threaten women’s lives in many African nations south of the Sahara, despite over 20 years of safe motherhood efforts. In order to reduce maternal mortality (and in accordance with the fifth Millennium Development Goal), institutions working for maternal-newborn health are committed to making biomedical obstetric care more available to all women during childbirth. However, the implementation of this strategy does not appear to be reaching women at the lower end of the socioeconomic spectrum, while those at the upper end are obtaining more and higher-quality services. The purpose of this study, therefore, is to evaluate use of biomedical obstetric care in two rural districts of Tanzania where this care is being supplied. Specifically, it seeks to explain how and why social and material differences among women affect their decisions and actions around childbirth care.

To address this aim comprehensively, a mixed-method, concurrent triangulation design was employed. Effects of sociodemographic characteristics on use of obstetric care were examined with logistic regression analysis \( (n = 1,150) \), while perspectives and experiences of childbearing women were explored in detail with participant observation and in-depth interviews \( (n = 48) \). Results from quantitative and qualitative study components were interpreted in light of each other. Significant variables from the quantitative analysis included material wealth (measured by household assets), parity, proximity to services, and perceived complications. Qualitative themes involved issues of accessibility (costs, distance
from facilities, discriminatory treatment), risk perception, and self-identity. The integrated findings suggest that use of obstetric care is influenced by a complicated interplay of factors closely tied to social and material status. As agents differentially positioned according to multiple markers of power, women pragmatically negotiate between an array of deterrents and motivators to secure the best care they can.

To improve use of biomedical obstetric care, interventions aimed at increasing the availability of these services should be specifically tailored to women who are socially or materially disadvantaged in their societies. In addition, more mixed-method research is needed to better understand the relationship between socioeconomic inequalities and use of (and access to) health services.

**Introduction**

Despite considerable efforts in global health over the past 20 years, complications related to pregnancy and childbirth continue to threaten the lives of women in many poor and transitional regions. Both within and across countries, patterns of maternal death and disability reflect how preventable these losses are, given adequate obstetric services and health care systems that facilitate access (1). The most recent estimates from the World Health Organization (WHO) show that 13 countries account for almost 70% of all maternal mortality – nearly half of which are in sub-Saharan Africa (2). Among these countries is Tanzania, where women face a one in ten chance of dying in their lifetimes from pregnancy-related complications. This figure stands in stark contrast with the one in 4,000 lifetime risk for women living in industrialized nations. With an estimated 920 maternal deaths per 100,000 live births (as compared to 20 in industrialized nations), sub-Saharan Africa has the highest maternal mortality ratio in the world (3). Perhaps most disquieting is the fact that the
crisis in this region appears to have stagnated since the establishment of the international Safe Motherhood Initiative in 1987 (4).

In light of dire costs to both public health and human rights, the United Nations community recognizes this issue as a priority problem; a three-fourths reduction of maternal mortality ratio is one of eight UN Millennium Development Goals (MDG-5) to be reached by 2015. In achieving this goal, the prevailing strategy is to make basic, biomedical obstetric care available to all women in childbirth and emergency obstetric care available to those with complications (5), where “biomedical” and “obstetric” refer to Western medicine with professional providers. The primary rationale for this focus is that complications leading to poor outcomes tend to occur during labor, delivery, and the immediate postpartum period. Although many of these problems can’t be reliably predicted or prevented, most can be treated with adequate obstetric care (6-9). Unfortunately, sub-Saharan Africa also demonstrates alarming figures on use of this care. Even though over 90% of women in most countries here receive some antenatal care, only 44% deliver with professional providers or in health facilities (4, 10). Perhaps these figures partially explain why, as of yet, there are no signs of progress towards MDG-5 in this region.

Lack of availability certainly contributes to under-use. It is well known that obstetric services require a broad base of support in the form of a functioning health care system – something that many African nations are still struggling to put into place. However, while improving the supply of obstetric care is undoubtedly necessary, it is not sufficient. Medical services must be sought if they are to be received, and there is reason to believe that women neither seek nor receive obstetric care in uniform fashion. Specifically, recent evidence indicates that interventions aimed at increasing the proportion of deliveries attended by
skilled providers and in health facilities are not reaching women at the lower end of the socioeconomic spectrum, while those at the upper end are obtaining more and higher-quality services (11-14). In favoring groups that are better off, the implementation of this strategy may support uneven maternal-newborn outcomes between the relatively poor and the well-off. Whether for the short or long term, this effect is troubling – especially given that the need for higher-level care tends to be greater among women who are disadvantaged (13).

One of the central problems with interventions to implement the current strategy for reducing maternal mortality is that they overlook crucial differences among childbearing women. Popular discourses in global health tend to represent women in less developed countries as an uneducated, tradition-bound, poor, and powerless aggregate – a representation criticized in feminist spheres as the colonial construction of the “third world woman” (15). There is no better example of this portrayal than Mrs. X, the starring character in a WHO story depicting “the road to maternal death” that was widely invoked throughout the 1990s. Anthropologist Roth-Allen deconstructs the oppressed Mrs. X as an image that shapes and freezes experiences of individual women into a singular way of being and acting (16). While references to this character have faded with the abandonment of antenatal risk identification (7, 17), researchers in maternal health continue to represent women in the South as uniform, passive recipients of biomedical care who depend on experts from the North to survive reproduction. Claims are still made about what all women want (biomedical obstetric care) and about why some women don’t seek this (they are victims of gender-biased institutions who lack information and understanding on how to best approach childbirth).

Making biomedical obstetric care more available to women in poor and transitional countries is and should be an imperative. However, if the approach to this goal assumes its
intended targets are a homogenous group with fixed desires and responses, resulting interventions will benefit some women and exclude others. As Abu-Lughod puts it, such “trafficking in generalizations” leads to generic policies and programs that erroneously assume what works for one third world woman is likely to work for another (18). Given this situation, how and why obstetric care is taken up at the local level by women in differing positions across material status, education, age, ethnicity, family, religion, and other characteristics become critical questions. In particular, the multidimensional ways in which states and processes of inequality influence demand for and access to obstetric services need to be better understood. The purpose of this study, therefore, is to evaluate use of biomedical obstetric care in a sub-Saharan African setting where this care is supplied. More specifically, it seeks to explain how and why women of different social and material positions in rural, south-central Tanzania desire, decide, and act in relation to childbirth services.

Use of Biomedical Obstetric Care in the Literature

At this time there is insufficient knowledge about the complex workings of social and material inequalities in health behavior, particularly in use of biomedical obstetric care among women in sub-Saharan Africa (and elsewhere). The mechanisms through which inequalities operate in health outcomes and behaviors are notoriously difficult to pin down, as researchers of social epidemiology and medical anthropology have noted (19, 20). However, enough evidence exists to suggest that women’s positions along lines of social and material status are deeply implicated in use of childbirth services, even if precise mechanisms remain unknown. It is my belief that mixed-method research can provide the most comprehensive approach to studying this problem. After reviewing what is currently known about use of obstetric care, I will demonstrate the utility of converging broad numerical
trends with detailed local perspectives to better understand some the pathways through which inequalities operate.

In the World Bank health and poverty studies of 56 developing countries, Gwatkin, et al. find that proportion of delivery with professional providers is far higher among wealthy groups than poor groups (as measured by asset quintiles). They also demonstrate the gap for this care to be greater than that of any other health service evaluated (12, 13). Kunst and Houweling’s report on these studies comes to the same conclusion – that poor-rich disparities in use of obstetric care are enormous, exhibiting a positive association between material status and use of this care across the entire wealth hierarchy. These authors cite Zambia as an example, where women using professional services make up 45% of the total sample but 90% of the wealthiest and 20% of the poorest. They also note that poor-rich inequalities in use rates within countries are much larger than cross-national differences in averages; in other words, a woman is better-off being wealthy in a country with low overall use than poor in a country where use is high (14). Besides these studies, multivariate analyses in sub-Saharan Africa, the Middle East, and Southeast Asia show a significant positive effect between indices of material status and use of obstetric care (21-30).

Demographic and socioeconomic factors beyond material status appear to play important roles as well. Even more than indicators of material wealth, maternal education consistently demonstrates a significant positive relationship with use of biomedical obstetric care across the globe (14, 21, 22, 24-28, 30-36). In some populations, ethnicity and religion are reported as notable determinants, although which ethnic and religious groups fall out this way are specific to context (21, 22, 24, 31, 32, 36). Results on maternal age, which is highly colinear with parity, are mixed. Six studies report age to have a negative association with use
of biomedical obstetric care, but this effect tends to be small and inconsistent (22, 24, 25, 30, 34, 36). Another three find that parity exhibits a strong negative relationship with this behavior (21, 26, 31). Additional factors found to be statistically significant are marital status, occupation, and indicators of autonomy like household decision-making. A study on use of facilities at childbirth in Zambia finds that being unmarried is one of the strongest predictors for delivering in a health facility, and that women who are employed outside of the home are more likely to deliver in a facility than those who are not (35). In contrast, Guatemalan women in consensual unions are more likely to use obstetric care than those who are single, and high household decision-making ability is positively associated with obstetric care use (31). Studies in Bangladesh and Cambodia show an increased use of obstetric services when the head of household works in an occupation other than farming (26, 30). But a study in Tanzania finds women living in male-headed households to be less likely to deliver in a facility than women living in female-headed households, regardless of occupation (24). Therefore, the ways in which indicators of women’s status influence use of services appear to vary greatly by measurement technique as well as by context.

Categories outside social and material status are also important determinants of obstetric care use. Using measures of time or distance, several studies evaluate the effect of physical proximity to care. Most of these studies conclude that distance is significantly and inversely associated with this behavior (21, 28, 30, 32, 35, 37) but two find it to be negligible (26, 31). Affordability is also a key factor; studies looking at the influence of health care expenses in East African countries conclude that formal, informal, and opportunity costs are major impediments to accessing these services (35, 38, 39). Other variables shown to affect use of obstetric care include antenatal care visits (21, 26, 29, 30, 36, 40), having a birth plan
or referral for facility delivery (28, 37), type of care used at previous deliveries (30, 36) and presence of perceived complications in current or prior pregnancies (26, 30, 31). Finally, few studies find that knowledge of complications and beliefs regarding what constitutes proper care at childbirth also affect use of biomedical obstetric care (28, 31, 35, 37).

Compared to quantitative research, studies using qualitative methods offer more detailed insights into women’s use of biomedical obstetric care. In public health literature, this research usually involves semi-structured interviews (SSIs) and focus group discussions (FGDs) that are derived from pre-conceived categories – an approach similar to quantitative work. Studies using these methods tend to report “barriers” to biomedical obstetric care but don’t often elaborate on the ways that barriers operate or consider factors that might motivate use. For example, an analysis of SSIs and FGDs in rural Uganda finds that obstacles to obstetric care use include cost, distance, previous experience, influence of spouse or relatives, and perceptions of normal versus abnormal symptoms (41). Other qualitative studies in West Africa fit barriers to emergency care into categories of cost, distance, failure to recognize complications (due to traditional beliefs), prior negative experiences with the health care system, and societal values or expectations (42-44).

While these studies provide critical understandings on local perspectives, most do not explicitly focus on the role of inequalities in use of obstetric care. If not exploring this issue in full, however, some studies examine it tangentially. For example, while evaluating “barriers beyond distance and cost,” Kowalewski, et al. look at how pregnant women living in southern Tanzania perceive and interpret danger signs. Besides describing this effect, the authors explain how one of the main reasons women do not seek care in referral-level facilities is poverty – a condition that triggers fear of discrimination by health care providers
In another study on why women in rural Uganda deliver at home despite knowledge of potential risks, Kyomuhendo explains that this act improves social position in one of the only domains where women still command power. The author also points to poverty as a factor that conditions this perception and choice in various ways. Finally, a qualitative study conducted by Pitchforth, et al. describes disturbing differences in how poor-off versus well-off women in Bangladesh are treated once they reach a facility with emergency obstetric care. While this research puts the issue of inequality front and center, it does not address social and material disparities in terms of decisions involved in seeking this service.

Anthropological literature also offers qualitative studies on use of obstetric care. In general, these studies differ from those in public health in that they primarily employ ethnographic methods, including participant observation, in-depth interviews, and an inductive approach that might be referred to as grounded theory. A number of ethnographic studies and theoretical writings are dedicated to women’s decisions around childbirth in medically pluralistic societies. This body of research clearly documents a great diversity in what women perceive as desirable and appropriate for various conditions arising in pregnancy and childbirth. However, although the level of descriptive detail in this type of study achieves greater depth than in much of the other research reviewed, there seems to be a tendency in anthropology to preference traditional beliefs and practices over structural inequalities in women and families’ choices. Voicing the problem with this emphasis, medical anthropologist James Young cautions:

“...there exists a potential for disservice to the people we study when cultural barriers to the acceptance and use of Western medicine are emphasized to the exclusion of any concern with the role that externally derived economic and organizational constraints also play in decision-making. This is because tradition focused explanations tend to put responsibility for under-use with the people and their way of life, rather than with the unequal manner in which modern medical services are made available to the poor and politically powerless” ((59) p. 506).
This being said, a few ethnographies do emphasize the effect of social and material inequalities on women’s care-seeking behavior at childbirth. Sargent’s monograph on obstetric decisions among the Bariba of Benin concludes that inequitable distribution of material resources are as much an issue for the type of care women receive as are social values like modesty, courage, prestige, trust, and competency (60). More recently, other authors also consider the influence of inequities in how and where women choose to give birth. Centering on perceived risks related to childbirth, Roth Allen’s work in Tanzania shows how social status can affect the quality of care a woman might receive through her relationship with facility providers (16). Van Hollen looks at how notions of modernity in India influence women’s choices across the reproductive health spectrum, including medicalization of childbirth among poor women in semi-urban areas (61). Whittaker considers choices for care during birth and the postpartum period amidst unequal State-citizen relations in Thailand (58). Finally, Lazarus’s ethnographic study in the United States highlights how control over childbirth is far more limited for poor women than those in higher-class groups, due to asymmetrical distribution of knowledge and power (62).

Taken together, quantitative and qualitative work indicates there is a wide array of what women want and what they can access with respect to biomedical obstetric care. Women’s behaviors appear to be mediated by their social and material positioning – put another way, how women use obstetric services depends upon which women one is talking about. However, the particular channels through which these inequalities operate are still not well understood. Quantitative analyses are effective in revealing broad population patterns of inequalities, but these studies are fragmentary and often unable to interpret the patterns they suggest. Qualitative methods are well suited to provide this interpretation, but thus far much
of this work stresses simplified categories of barriers and culture over complicated but meaningful differences in women’s lives. Unfortunately, there is a dearth of mixed-method research on this topic, a design able to generate powerful statistical analyses while deciphering this information in light of local realities. As such, integration of quantitative analyses with qualitative insights is especially appropriate for the study of complex social phenomena (63), such as the interweaving of obstetric care use with social and material inequalities. The insufficiency of mixed-method studies on use of obstetric care presents a major gap in the literature – one that this paper seeks to address.

**Research Methods**

**Study setting**

The study setting is comprised of 25 villages in the adjacent Kilombero and Ulanga Districts of the Morogoro Region, south-central Tanzania. Known as the Kilombero Valley, this area is bordered by the Selous Game Reserve to the east and the Udzungwa Mountains to the northwest. Its geography consists of African savannah with alternating dry and rainy climates throughout the year. The 25 villages make up the rural component of the Ifakara Demographic Surveillance Site (DSS), part of the INDEPTH DSS network that routinely collects data on pregnancy, birth, death, migration, and specific health-related events. At the time of data collection, the population of these villages totaled approximately 94,000 people (20,000 households) spread over 1,440 km² in Kilombero District and 1,000 km² in Ulanga. Total fertility rate is most recently estimated at 5.3 births per woman and maternal mortality ratio at 500 deaths per 100,000 live births (64).

The inhabitants of this area are ethnically diverse, representing established groups of Ndamba, Pogoro, Bena, Hehe, Nyakyusa, and Gindo as well as semi-nomadic groups like
Sukuma and Maasai. Villages in Kilombero District tend to be more ethnically diverse than those in Ulanga, as soil fertility and food availability are greater there. The population is also diverse with respect to religion; Christian, Muslim, and indigenous practices are prevalent throughout. Agriculture and petty trading form the basis upon which most people earn their livelihoods. In 2001, mean household expenditure was USD $77-96 per month and varying by season (65). Even apart from semi-nomadic groups, this population is highly mobile. Most families travel to shamba (farms with second homes) for weeks at a time during the long rains. In addition, some residents migrate to urban areas or nearby sugar and teak plantations for regular wage work. A patchwork of government and mission health facilities serves the area, including two district-level hospitals, two village health centers, and 11 village dispensaries. About 49% of all deliveries greater than five months gestation occur at home, while 51% take place in facilities (64).

Study design

As indicated above, a mixed-method design was employed in order to approach this research comprehensively. For reasons of both appropriateness and practicality, I selected a concurrent triangulation strategy that assigns equal weight to the quantitative and qualitative components. According to experts in mixed-method research, models for these studies can fall into categories of either concurrent or sequential designs. These groups are further differentiated by whether they prioritize one methodological component over the other (“dominant-less dominant design”) or assign them equal weight (“equivalent status design”) (66, 67). Of the six major models that vary according to these characteristics, the concurrent triangulation design tends to be the most familiar. This design is used when the researcher conducts quantitative and qualitative methods simultaneously to triangulate the phenomenon.
of interest, or to compare and corroborate findings within a single time frame from different angles or vantage points (66). IRB approval for this research was obtained from the University of North Carolina-Chapel Hill, the Ifakara Health Institute (IHI), the Tanzania National Institute of Medical Research (NIMR), and Tanzania Commission for Science and Technology (COSTECH).

Quantitative data and analysis

The data used in the quantitative component of this study derive from two sources. The first is the Postpartum Interview (PPI) Study, a retrospective population-based survey conducted by the U.S. Centers for Disease Control and Prevention (CDC) and IHI. Using the Ifakara DSS as a platform, this survey collected information on maternal-newborn health outcomes as well as health practices throughout pregnancy and the postpartum period. In theory, all women living in the Ifakara DSS area who experienced a pregnancy outcome during the time of data collection were interviewed between 42 and 60 days after pregnancy termination. The preliminary PPI data used in this analysis were collected from mid-November of 2007 through June of 2008, and include living participants who had pregnancy outcomes after five months gestation. The second data source, the Ifakara DSS, contributes household-level data on occupation, household assets, and proximity to obstetric services. The socioeconomic data from this source were collected in the October to December round of 2007, while data on proximity to services were collected from May to July of 2008.

The dependent variable, use of biomedical obstetric care, refers to whether a woman received or sought delivery care at a health facility versus those who did not. In the context of the study setting, “professional” providers typically worked in facilities, while non-professional providers like traditional birth attendants (TBAs) tended to conduct deliveries in
homes. Even though this formula for delivery personnel did not always hold, it was true for the large majority of cases. Furthermore, the critical outcome in this analysis involves decisions and behaviors (and to some extent, intentions) in relation to biomedical obstetric care as represented by health facilities – not the care they ultimately received. Thus, use of obstetric care was defined here as women who delivered in a health facility or those who delivered on their way to one.

Although most of the independent variables constructed are self-explanatory, a few deserve some clarification. First, age was left out of the model due to its high colinearity with parity and the greater relevance of parity to use of obstetric services. Ethnicity was collapsed into the largest or numerically dominant indigenous group (Pogoro), secondary indigenous groups, and minority groups more recently established in the area. Head of household’s occupation was collapsed into two categories – one for farmers (subsistence or cash-crop) and another for those involved in small business (shop owners, tailors, bicycle mechanics, etc.) or having formal employment. Material status was measured with key household assets, including roofing material (iron versus thatch) and possession of a radio. Community-level variables included district of residence (Kilombero or Ulanga) and residence in a village with a health facility at time of delivery. Factors involving antenatal care included gestational age of first visit and whether a provider referred the woman to deliver in a facility. Finally, three variables for problems perceived during or close to labor were added: labor lasting too long, excessive bleeding, and fever.

After figuring descriptive statistics and cross-tabulations, a model was estimated using multilevel logistic regression. The main variables of interest were demographic indicators of social and material status: ethnicity, religion, marital status, education, parity,
head of household’s occupation, and household assets. Proximity to health facilities was included to control for its potentially powerful effect, given the results of previous studies. The data sources used did not contain variables indicative of women’s autonomy or care used at previous deliveries – these factors thus became part of the compound error term along with other unobserved variables influencing use of obstetric care. The final model was estimated with Stata 10 SE statistical computing software. To correct for intracluster correlation inherent in the data, robust estimates of variance were obtained using the cluster command with household identification number. This technique was chosen over Stata’s survey commands due the relatively simple structure of the dataset. After fitting the model, joint significance tests were performed on main variable groupings. In order to interpret magnitude of effect more closely, predicted probabilities were calculated for significant variables of particular interest.

Qualitative data and analysis

The qualitative component of this study relies on primary data collected from September of 2007 through June of 2008, with a six-week break in December and January. Data collection methods were ethnographic, including participant observation and semi-structured interviews. Although I conducted both methods in all 25 villages, for the former I focused on three central villages in each district. Besides women ages 14 and up with prior childbirth experience, these informal interactions also included adult family members and obstetric providers. They typically took place at women’s homes, fields, and health facilities. Throughout fieldwork, I also volunteered clinical skills in local facilities and was able to gain insight from this angle. Last, time was spent observing and talking with TBAs. A small number of key informants facilitated the participant observation process, organizing my
entrée into village life and offering valuable perspective on observations and interactions. Jottings taken during all research encounters were systematically developed into a growing body of detailed fieldnotes as my understandings evolved.

The research plan allowed for in-depth semi-structured interviews with up to 48 women who delivered within the previous six months. Participants for the first 16 interviews were identified through the process of participant observation; these women varied on delivery place and social and material status as defined by local standards. Once an adequate pool of data accumulated, the remaining participants were identified from the PPI and DSS datasets according to sociodemographic characteristics and indicators of material wealth. Potential participants were evenly split by district of residence and then by delivery type, where half used obstetric care and half did not. These groups were further stratified by material status using household assets. Finally, an attempt was made to obtain variation on sociodemographic factors within quadrants. This procedure, called “stratified purposeful sampling,” is used when an investigator wants to ensure the inclusion of certain cases who vary on pre-selected parameters (63). It was employed here to examine the effect of social and material status on use of obstetric care as this positioning was construed by either local standards or statistical categories. Table 2.1 presents a visual model of this strategy.

Table 2.1 Stratified purposeful sampling for in-depth interviews

<table>
<thead>
<tr>
<th>Women using biomedical obstetric care</th>
<th>Women not using biomedical obstetric care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants in the upper 50th percentile of the household assets scale</td>
<td>Participants in the upper 50th percentile of the household assets scale</td>
</tr>
<tr>
<td>Variation on age, parity, ethnicity, religion, marital status, education</td>
<td>Variation on age, parity, ethnicity, religion, marital status, education</td>
</tr>
<tr>
<td>Participants in the lower 50th percentile of the material assets index</td>
<td>Participants in the lower 50th percentile of the material assets index</td>
</tr>
<tr>
<td>Variation on age, parity, ethnicity, religion, marital status, education</td>
<td>Variation on age, parity, ethnicity, religion, marital status, education</td>
</tr>
</tbody>
</table>
Broad interview topics remained the same throughout data collection, covering women’s stories of their most recent and other births, views of locally available childbirth services, perceptions of inequalities and effects on obstetric care use, and conceptualizations of childbirth and risk. Groups often formed spontaneously around interviews, as people would gather out of curiosity and want to voice their opinions. If an interviewee privately gave consent, these individuals were allowed to participate but questions remained directed at the interviewee. My research assistant, Christina Makungu, and I conducted all interviews in Swahili and recorded them with a digital audio-recorder. Recordings were translated and transcribed within two weeks. Back-translations were performed on random five-page segments to check for accuracy. Fieldnotes taken in regular post-interview discussions were added to the bottom of interview transcripts.

Initial qualitative analyses were performed in conjunction with data collection. This occurred in an iterative process of generating hypotheses through the writing of fieldnotes, testing these ideas with participant observation and in-depth interviews, and then revising the evolving theoretical “model” to better fit the most recent observations. This process was repeated until the model, incorporating salient categories and their relationships to each other, demonstrated consistency with respect to new observations and interactions. After leaving the field, a final analysis was conducted that involved a series of steps. First, fieldnotes and interview transcripts were re-read chronologically in order to get an overall sense of the work. These “datasets” were then indexed according to the most recent categories generated in the field, using the qualitative data software program HyperRESEARCH. Last, indexed categories (now themes) and their relationships to each other were refined and detailed descriptions written.
Integration of methods

Integration of quantitative and qualitative components occurred at three points. The first was the use of PPI and DSS data in selecting potential participants for in-depth interviews, as described above. The second occurred during quantitative analysis, where understandings from qualitative findings influenced choices regarding statistical variables. Examples include how the dependent variable was defined, what independent variables were controlled for (in addition to theoretical considerations and findings of previous studies), and ways in which categories of independent variables were collapsed. Outside of constructing variables, the datasets remained analytically distinct until the final juncture of crossover that occurred in the interpretation of study findings. At this point, results from each component were interpreted in light of each other in an attempt to discern and convey a more complete picture of obstetric care use. This integrative interpretation of findings is presented in the results and discussion sections.

Results

Descriptive statistics

The total sample size after merging data from the PPI survey and Ifakara DSS was 1,282, but 127 observations in the PPI survey were missing DSS data. These observations could not be included in the analysis, bringing the total to 1,155. Of these women, 99.57% received some antenatal care with professional providers. The five that did not were dropped from the dataset after ensuring no systematic differences existed among them, since one of the important control variables was based on what took place during antenatal care. The final sample size was 1,150. Table 2.2 gives descriptive statistics for use of biomedical obstetric care as well as delivery with a professional provider (doctor, medical officer, nurse-midwife,
nurse, health aide). As noted, delivery place usually corresponded with provider type – but not always. The cross-tabulations of delivery attendant by place in Table 2.3 demonstrate this discrepancy in the sample population. The variation seen here is supported by the qualitative data and explored in a separate report that focuses on the complexities of biomedical obstetric care in the context of the study setting (68). Table 2.4 presents descriptive statistics of the sample. The majority of women in the sample were married (or in consensual unions) and lived in households relying on farming. The mean number of children was four and the mean age was 26. In terms of household assets, most families possessed a radio (70.61%), but did not have an iron roof (65.39%).

Table 2.2 Descriptive statistics for use of biomedical obstetric care \( (n = 1,150) \)

<table>
<thead>
<tr>
<th>Variable</th>
<th>( n )</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used obstetric care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivered in a health facility</td>
<td>668</td>
<td>58.09</td>
</tr>
<tr>
<td>Delivered on the way</td>
<td>63</td>
<td>5.48</td>
</tr>
<tr>
<td>Did not use obstetric care</td>
<td>419</td>
<td>36.43</td>
</tr>
<tr>
<td>Delivered with a professional provider</td>
<td>624</td>
<td>54.26</td>
</tr>
<tr>
<td>Delivered with a non-professional provider</td>
<td>526</td>
<td>45.74</td>
</tr>
</tbody>
</table>

Table 2.3 Cross-tabulations of delivery provider by delivery place \( (n = 1,150) \)

<table>
<thead>
<tr>
<th>Type of delivery attendant</th>
<th>Delivered at home, in the field, or on the way ( n )</th>
<th>%</th>
<th>Delivered in a health facility ( n )</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctor, medical officer</td>
<td>0</td>
<td>0.00</td>
<td>33</td>
<td>100.00</td>
</tr>
<tr>
<td>Nurse-midwife, nurse, health aide</td>
<td>14</td>
<td>2.37</td>
<td>577</td>
<td>97.63</td>
</tr>
<tr>
<td>TBA, traditional healer</td>
<td>262</td>
<td>88.51</td>
<td>34</td>
<td>11.49</td>
</tr>
<tr>
<td>Relative, friend, other, self</td>
<td>206</td>
<td>89.57</td>
<td>24</td>
<td>10.43</td>
</tr>
<tr>
<td>Total</td>
<td>482</td>
<td>41.91</td>
<td>668</td>
<td>58.09</td>
</tr>
<tr>
<td>Categorical variable</td>
<td>n</td>
<td>%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>-----</td>
<td>-----</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dominant group</td>
<td>274</td>
<td>23.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary groups</td>
<td>607</td>
<td>52.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minority groups</td>
<td>269</td>
<td>23.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christian</td>
<td>775</td>
<td>67.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muslim</td>
<td>344</td>
<td>29.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional</td>
<td>31</td>
<td>2.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unmarried</td>
<td>197</td>
<td>17.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/consensual union</td>
<td>953</td>
<td>82.87</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No education</td>
<td>181</td>
<td>15.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some primary school</td>
<td>312</td>
<td>27.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete primary school or higher</td>
<td>657</td>
<td>57.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Occupation for head of household</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faming</td>
<td>979</td>
<td>85.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small business</td>
<td>171</td>
<td>14.87</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Household assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thatch roof</td>
<td>752</td>
<td>65.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iron roof</td>
<td>398</td>
<td>34.61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No radio</td>
<td>338</td>
<td>29.39</td>
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<tr>
<td>Radio</td>
<td>812</td>
<td>70.61</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Proximity from home to health facility</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Up to 30 minutes</td>
<td>434</td>
<td>37.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 to 60 minutes</td>
<td>397</td>
<td>34.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60 minutes or greater</td>
<td>319</td>
<td>27.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>District of residence</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kilombero</td>
<td>615</td>
<td>53.48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ulanga</td>
<td>535</td>
<td>46.52</td>
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<td></td>
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<td><strong>Health facility in village of residence</strong></td>
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<td></td>
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</tr>
<tr>
<td>No health facility</td>
<td>514</td>
<td>44.70</td>
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<td></td>
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<tr>
<td>Health facility</td>
<td>636</td>
<td>55.30</td>
<td></td>
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<tr>
<td><strong>Antenatal referral for facility delivery</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Not referred</td>
<td>590</td>
<td>51.30</td>
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</tr>
<tr>
<td>Referred</td>
<td>560</td>
<td>48.70</td>
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<tr>
<td><strong>Perceived problems</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labor lasting too long</td>
<td>294</td>
<td>25.57</td>
<td></td>
<td></td>
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<tr>
<td>Excessive bleeding</td>
<td>133</td>
<td>11.57</td>
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<tr>
<td>Fever</td>
<td>409</td>
<td>35.57</td>
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Table 2.4, continued

<table>
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<tr>
<th>Continuous variable</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>26.32</td>
<td>14</td>
<td>47</td>
</tr>
<tr>
<td>Parity</td>
<td>3.65</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>Month of first antenatal care visit</td>
<td>5.02</td>
<td>2</td>
<td>9</td>
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</table>

**Multilevel logistic regression and ethnographic fieldnotes**

Table 2.5 presents results from the logistic regression model fit to explore factors that influence the likelihood of using a facility for delivery, including adjusted odds ratios with 95% confidence intervals. As compared to women in the dominant ethnic group, those in a secondary group were more likely to use biomedical obstetric care (OR = 1.68, 95% CI = 1.12, 2.54). Being in a minority ethnic group did not reach statistical significance for use of care. Assigning modal categories or average values to all other predictors, the probability of a Pogoro woman using obstetric care was 45%, compared to 65% for a woman in a secondary group. This result can be explained in part by the qualitative finding that there appears to be something of a social stigma attached to Pogoro ethnicity, despite its being the largest group in the area. In terms of ethnicity-related reputations and processes of exclusion/inclusion, it should be noted that minority groups were highly diverse, including some nationally renowned for wit, work ethic, or material success and others existing at the farthest margins of society. In contrast with ethnicity, religion was not significant when controlling for other factors; the initially significant effect of being Muslim was attenuated when controlling for district of residence.

Whether a woman was in a marriage relationship had no bearing on her use of obstetric care. This lack of effect is not surprising, as marital status did not emerge in the qualitative data as a relevant factor (although certain characteristics of male partners did, like
work ethic, generosity, and sobriety). Women with complete primary school or higher were more likely to use obstetric care than those with no education (OR = 1.39, 95% CI = 0.94, 2.07). However, there was no significant difference between women with some primary school and those with none. The predicted probability of using obstetric care for a woman with complete primary school or higher was 47%, while it was 28% for a woman with only some primary school (with modal or average values for other variables). Parity demonstrated a strong inverse relationship with use of obstetric care (OR = 0.86, 95% CI = 0.81, 0.92). A Porogo, Christian, married woman with complete primary school delivering her first child had a 62% chance of using obstetric care. However, this probability dropped to 45% if this same woman were pregnant with her fourth child, and to 16% if pregnant with her 10th. It is likely that both age and childbirth experience contributed to this effect. However, these factors were difficult to differentiate even with qualitative methods. What can be said from ethnographic findings is that, when they could, younger women tended to use health facilities in order to act and appear modern, while older women sometimes delivered at home as a function of habit or past experience.

Other variables indicating social and/or material status had expected results. Head of household’s occupation was not an important determinant of the likelihood that women used obstetric care. Qualitative findings revealed that head of household’s occupation had little to do with a woman’s material status, especially if this person was someone other than the woman herself (i.e. husband, father, brother). There was no assurance that wealth of a household head would reach a pregnant woman and her health needs. Women were generally subordinate to husbands or partners within households and did not tend to be involved in decisions regarding income generated by men or by the family as a collective. At the same
time, some women had separate income-generating activities of their own; for example, a 
poor rice farmer may have a wife who farms her own vegetables or brews beer and has 
become wealthy selling these goods in the market. Depending upon the living arrangement 
and individual relationship, this woman may or may not hand over her earnings to her 
husband – but she would likely invest them in household essentials.

For this reason, household assets were more pertinent indicators of material wealth 
than head of household’s occupation. This finding confirms what a number of researchers in 
global health and economics have observed – that the construct of socioeconomic status can 
vary dramatically across specific contexts (69-71). In this setting, women living in a house 
with an iron roof were somewhat more likely to use obstetric care than those in houses with 
thatched roofs (OR = 1.57, 95% CI =1.15, 2.13). Women in houses with a radio were also 
more likely to use obstetric care than women in houses without this good (OR = 1.32, 95% 
CI = 0.97, 1.79). A Pogoro, Christian woman delivering for the fourth time with complete 
schooling and in a consensual union with a farmer had a 63% chance of using obstetric care 
if her roof was iron, compared to a 45% chance if it was thatch (holding all other variables at 
modal or average values). If a woman’s house lacked a radio in addition to iron roof, her 
probability of using obstetric care was 34%. Taking social and material indicators together, 
predicted probabilities were especially telling. Holding all other variables constant, a woman 
in the study setting who was disadvantaged on significant variables indicative of social and 
material status (i.e. a Pogoro woman with less than complete primary education who lacked 
an iron roof and radio) had a 19% chance of using obstetric care. But if this woman was in a 
secondary ethnic group, had complete primary schooling, and lived in a home with an iron 
roof and radio, this probability was 80%.
Distance and place-based effects in the model were particularly strong. Women living in houses 30 to 60 minutes from the nearest health facility were less likely to use obstetric care there than women within 30 minutes of the facility (OR = 0.45, 95% CI = 0.31, 0.64), and less likely still if they lived more than 60 minutes away (OR = 0.26, 95% CI = 0.18, 0.38). Community-level variables were also important; women in Ulanga were far more likely to use obstetric care than women in Kilombero (OR = 2.40, 95% CI = 1.62, 3.55). Here district negated the effect of being Muslim, as many more Muslims resided in Ulanga (73%) than Kilombero (27%). A closer examination of this overlap showed that Muslims in Kilombero did not use obstetric care more than Christians, nor were there differences in the reverse. Thus, the effect was more about place than religion. Both districts had one hospital and one health center; however, Ulanga had seven dispensaries while Kilombero had only four. Cross-tabulations revealed that 68% of women in Ulanga resided in a village with a health facility, compared to just 31% of women in Kilombero. As expected, women in a village with a facility were more likely to use obstetric care than those in a village without one (OR = 1.44, 95% CI = 1.03, 2.02). Only two villages deviated from this pattern, both with facilities but low use of obstetric care. Qualitative findings explain this result – the dispensary in one village had providers known to be extremely neglectful and corrupt, while in the other there were a number of especially active, well-respected TBAs.

Gestational month of first antenatal care visit had a strong inverse association with obstetric care use (OR = 0.86, 95% CI = 0.78, 0.95). Although month of antenatal care initiation might reflect a number of factors related to use of obstetric care at delivery, the two are distinct in timing, cost, and degree of intervention. Women referred to deliver in a health facility during antenatal care were also more likely to use obstetric services than women who
were not referred (OR = 1.99, 95% CI = 1.47, 2.70). Finally, whether a woman perceived problems in labor was significantly associated with use of biomedical obstetric care. Women who felt that labor was too long or that bleeding was excessive were more apt to use obstetric care than women who did not report these problems (OR = 3.13, 95% CI = 2.17, 4.53; OR = 1.75, 95% CI = 1.01, 3.02). Perceiving a fever did not affect use, however, possibly because the Swahili term for fever (homa) refers to a more general condition of malaise that any woman in labor might experience.

Table 2.5 Multilevel logistic regression of biomedical obstetric care use on independent variables (n = 1,150)

<table>
<thead>
<tr>
<th>Categorical variable</th>
<th>Odds ratio (robust standard error)</th>
<th>95% Confidence interval</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Dominant group)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary groups</td>
<td>1.68 (0.35)**</td>
<td>1.12, 2.54</td>
</tr>
<tr>
<td>Minority groups</td>
<td>0.96 (0.21)</td>
<td>0.62, 1.48</td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Christian)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muslim</td>
<td>1.27 (0.22)</td>
<td>0.89, 1.79</td>
</tr>
<tr>
<td>Traditional</td>
<td>0.77 (0.37)</td>
<td>0.30, 1.99</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Unmarried)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/consensual union</td>
<td>1.07 (0.22)</td>
<td>0.71, 1.61</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(No education)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some primary school</td>
<td>0.87 (0.19)</td>
<td>0.56, 1.34</td>
</tr>
<tr>
<td>Complete primary school or higher</td>
<td>1.39 (0.28)*</td>
<td>0.94, 2.07</td>
</tr>
<tr>
<td><strong>Household head’s occupation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Farming)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small business</td>
<td>1.24 (0.26)</td>
<td>0.83, 1.86</td>
</tr>
<tr>
<td><strong>Household assets</strong></td>
<td></td>
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<tr>
<td>(Thatch roof)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iron roof</td>
<td>1.57 (0.25)**</td>
<td>1.15, 2.13</td>
</tr>
<tr>
<td>(No radio)</td>
<td>1.32 (0.21)*</td>
<td>0.97, 1.79</td>
</tr>
<tr>
<td><strong>Proximity from home to health facility</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Up to 30 minutes)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 to 60 minutes</td>
<td>0.45 (0.08)**</td>
<td>0.31, 0.64</td>
</tr>
<tr>
<td>60 minutes or greater</td>
<td>0.26 (0.05)**</td>
<td>0.18, 0.38</td>
</tr>
</tbody>
</table>

*p = 0.10 level, **p = 0.05 level, ***p = 0.01 level
Table 2.5, continued

<table>
<thead>
<tr>
<th>Categorical variable</th>
<th>Odds ratio (robust standard error)</th>
<th>95% Confidence interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>District of residence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Kilombero)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ulanga</td>
<td>2.40 (0.48)**</td>
<td>1.62, 3.55</td>
</tr>
<tr>
<td>Health facility in village of residence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(No health facility)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health facility</td>
<td>1.44 (0.27)**</td>
<td>1.03, 2.02</td>
</tr>
<tr>
<td>Antenatal referral for facility delivery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Not referred)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Referred</td>
<td>1.99 (0.31)***</td>
<td>1.47, 2.70</td>
</tr>
<tr>
<td>Problems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labor lasting too long</td>
<td>3.13 (0.59)**</td>
<td>2.17, 4.53</td>
</tr>
<tr>
<td>Excessive bleeding</td>
<td>1.75 (0.49)**</td>
<td>1.01, 3.02</td>
</tr>
<tr>
<td>Fever</td>
<td>0.80 (0.12)</td>
<td>0.60, 1.09</td>
</tr>
<tr>
<td>Continuous variable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parity</td>
<td>0.86 (0.29)***</td>
<td>0.81, 0.92</td>
</tr>
<tr>
<td>Month of first antenatal care visit</td>
<td>0.86 (0.04)***</td>
<td>0.78, 0.95</td>
</tr>
</tbody>
</table>

*p = 0.10 level, **p = 0.05 level, ***p = 0.01 level

In-depth interviews and ethnographic fieldnotes

This section reviews the main findings from in-depth semi-structured interviews, which were conducted with 48 women who delivered within the previous six months. As described above, participants for the initial 16 interviews were identified through participant observation and the remaining 32 participants identified by select characteristics in PPI and DSS datasets. All women invited for an interview agreed to participate. The number of interviews conducted with women using obstetric care was 24, including 12 who were well-off and 12 who were poor. The number of interviews with women not using obstetric care was also 24, but with eight well-off women compared to 16 poor women. The reason for this incongruity has to do with the fluid nature of ethnographic research. Through the process of data collection and analysis, it became clear that well-off women delivering at home did so
for relatively straightforward reasons, while factors affecting this behavior among poor women were far more complicated. Because this study explicitly aims to shed light on the situation of women who are disadvantaged, I chose to focus on the latter group. As described in the methods section, variation was obtained within interview quadrants on age, parity, ethnicity, religion, marital status, and education.

Presented below are descriptions of the themes on use of obstetric care for each interview quadrant. Emphasis is placed on inequality in terms of material status, as wealth-related disparity seemed to have the most direct overall influence on women’s use of services. It is important to clarify that local standards of social well-being centered heavily on the material wealth of individuals and families (not always the same). Therefore, the positioning of interviewees based on local standards coincided with that of women identified with statistical indicators to the extent that the latter categories adequately captured women’s material status. Many channels through which demographic variables affected obstetric care use were mediated by women’s access to material resources (i.e. land, agricultural inputs, livestock, and cash).

**Relatively well-off women using biomedical obstetric care**

Women who were materially well-off used obstetric care according to themes of risk perception, self-identity, and accessibility. These women thought of childbirth as being highly dangerous. They were also confident that their local health facility not only could, but would help them if they developed a complication. Most expressed more confidence in hospitals than health centers or dispensaries but they still viewed the care at smaller facilities as adequate. Confidence in TBAs was low; most appreciated the role of these providers but expressed distrust in their ability to handle problems. Younger women with more education
often explained their choice with, “it is what progressive women (wanawake wa kisasa) do.”

I refer to this association with a modern female type as self-identity, and it was a strong motivator to seek obstetric care. All women in this group made an effort to dress up before going to the facility. Appearing in a new outfit with hair freshly braided marked a woman as well-off – clean and modern with a husband or family who cares for her properly (even if she herself generated the income to create this appearance). Such presentation was crucial because it ensured the best care available. Besides appearance, this affect also involved tipping the provider and bringing various items to the facility collectively known as vifaa, which included gloves, soap, a basin, a razor, cloth, and kerosene. Of course, women’s preferences for delivery care and the many reasons for these didn’t always coincide with their behavior. These women used obstetric care not only because they preferred and could afford it but also because they were able to access it, both physically and socially.

Relatively well-off women not using biomedical obstetric care

On the whole, women in this quadrant shared the risk perceptions and identity values of women in the preceding group. However, they differed on a few key factors – the most obvious of which involved access. Childbirth can be unpredictable, with haphazard timing and erroneous fits and starts. The immediate and uncertain nature of this event, in conjunction with distance to and distribution of facilities, left some women who would otherwise be able to use obstetric care utterly unable to reach it. Most women in this group simply did not get to a facility in time, especially during the rainy season when roads were washed out or if they had to cross a river. In the end, most of these women had a TBA or relative assist them while a small number delivered on the way to a facility or at home alone. A second access issue for a minority of women in this group was lack of decision-making
power. Generally, pregnant women had a say in where they delivered but occasionally women preferring facility delivery stayed home at the discretion of husbands or other familial authorities (although the opposite could also be true).

Besides access problems, an additional theme that differentiated these women from those who used obstetric care involved level of childbirth experience. Women who successfully delivered at home in the past were less preoccupied with where they delivered this time. Usually older, most of these women also viewed childbirth as dangerous and insisted they preferred facilities for delivery. However, ultimately they were not concerned enough to seek care there. Finally, a few women in this group distrusted the care available to them. These women, all from outside the Kilombero Valley, recognized the limits of village facilities and questioned whether the quality of care they would receive was worth the effort required to get it.

Relatively poor women not using biomedical obstetric care

Several themes converged to explain why poor women did not use obstetric care. Like the above group, factors of distance and decision-making power were also problems for these women. However, even when these factors were not present, many poor women still chose to deliver at home. First and foremost was the issue of cost. Mission facilities charged a fee ranging from 3,000 to 10,000 Tanzanian shillings (about $3.75 to $12.50 USD) for uncomplicated deliveries. Government facilities could not charge official fees for this service but most providers working here (and some in mission facilities) expected to be paid an asante or “thank you” of 3,000 to 5,000 Tsh. On top of these charges, providers required women to bring vifaa to the facility, which could cost up to 30,000 Tsh – a huge expense for most families. Finally, transportation costs were not unusual and could be extremely high if a
woman used an ambulance to get to a district hospital. In contrast, deliveries with TBAs were much cheaper. Although these providers expected payment, it was usually a smaller amount and could be given in kind – a bag of rice or beans after harvest, some eggs or a chicken when the family could afford it. Finally, while TBAs appreciated a pair of gloves or bit of soap from laboring women, most did not enforce strict requirements regarding 

Related to appearance and informal expenses, women in this group also had to worry about how they would be treated in the facility. If they looked poor, lacked vifaa, or could not afford to pay asante, they might face abuse, neglect, or at least verbal humiliation from providers. A number of women experienced delivering alone in facilities or being turned away when they failed to produce these items. This kind of treatment provoked shame in poor women. Facilities were public spaces and what occurred there became a matter of public knowledge; a poor woman’s social standing was diminished when her material status was made evident. Other features that could put women at risk for mistreatment were ethnicity and the characteristics of male partners. Throughout fieldwork, persons from secondary and minority ethnic groups (including providers) informed me that Pogoro people are “lazy” and “don’t know how to work,” although my data never supported these claims. The stigma that seemed to be attached to this group made Pogoro women (as well as some in other indigenous groups) vulnerable to being devalued in facilities. Women with partners reputed as lazy, stingy, or frequently drunk also could receive differential treatment. Because asante and vifaa were outwardly a husband’s responsibility, not having these could indicate
having a bad husband. In contrast with *wanawake wa kisasa*, women in this group often self-identified as *maskini* (“poor”) or *mwenzangu na mimi* (“people like me”). Essentially, they opted to deliver at home due to out-of-reach economic and social costs involved with biomedical care.

In looking at risk perception, women in this quadrant also viewed childbirth as dangerous. Most thought their local facility could help in the event of a complication but, in contrast with women who were better-off, they were uncertain about whether facility providers actually would assist them. These women openly discussed conceptualizations of childbirth, and supernatural etiologies were not uncommon. Because symptoms resulting from a curse could often be treated in facilities, problems stemming from witchcraft did not necessarily prevent or delay women from seeking care there. Only a few women felt that going to a facility could endanger them; not because they doubted the safety of the services but because presenting at the facility might alert jealous neighbors to their vulnerable condition, who might then work witchcraft to complicate the birth process. It was unclear whether wealthier women held these ideas – they were reluctant to talk about such matters, although some Christians expressed disdain at witchcraft ideation. Finally, educational status alone did not appear to coincide with childbirth conceptualizations or risk perception but appeared to be influential when partnered with identity.

Relatively poor women using biomedical obstetric care

Women in this group had to overcome all the deterrents described above in order to use obstetric care. A number of them had a relative working at the facility in some capacity – an advantage that enabled them to access fair treatment despite being poor. Other facilitators included antenatal referral for facility delivery and a husband or family highly supportive of
obstetric care. Many also lived within reasonable distance to a health facility. But there were two powerful motivators in particular that assisted women without these advantages to seek and receive obstetric care. The first is risk perception. Whether from past experience, perceived problems, or some other source, these women had an acute belief that childbirth was dangerous. Although aware that their treatment could be substandard because of their relative positioning, they opted to go to a facility anyway in hopes they might get help should they need it. The second major motivator is the desire some women had to identify as modern/progressive – to act and appear like wanawake wa kisasa. In some cases, a self-identity involving specific notions of modernity overcame one that pertained to social positioning, wealth, and shame. An example of such a case would be a woman with complete primary education who, although relatively poor, wouldn’t conceive of giving birth at home with a TBA. At a state in-between wanawake wa kisasa and mwenzangu na mimi, this woman would put on the nicest clothes she had, gather together whatever vifaa and asante she could manage, and go to the facility hoping for the best.

Discussion

Taken together, the findings from this study suggest that use (and non-use) of biomedical obstetric care result from a complex interplay of influences. Quantitative data identifies important factors for this behavior while qualitative findings reveal the various routes through which these factors operate. Specifically, the statistical analysis indicates certain aspects of social and material status (ethnicity, education, parity, iron roof, radio) as significant determinants of biomedical care use. The ethnographic analysis demonstrates multiple and overlapping processes of how these variables operate through mechanisms of affordability and risk as well as more nuanced workings of social positioning, differential
treatment, shame, entitlement, and self-identity. Results from the study components did not always converge seamlessly. For example, the significant but not overly impressive effects of iron roof and radio did not quite match the ethnographic conclusions regarding eminence of relative wealth. Instead of interpreting these findings as ambiguous or deficient, however, this discrepancy allows opportunity for deeper understanding. Qualitative findings, while not representative in the sense of statistics, were often more valid with respect to salient categories at the local level. The ethnographic work shows that, while iron roofs or radios may approximate a family’s economic well-being, these household items are not necessarily the best indicators of material status for individual women in the study setting.

Thus, quantitative data applies to many different women, and statistical effects are performed through a variety of pathways. Qualitative work can provide valuable information about these effects and pathways in the lives of particular people. The most crucial overall finding from this mixed-method approach was that social and material positioning deeply shaped decisions and behaviors related to biomedical obstetric care – independently of distance to facilities, antenatal referral, and perceived problems in labor. Virtually all women perceived childbirth as dangerous and preferred the idea of delivering in a health facility to giving birth at home. However, such common perception led to divergent actions based on unequal physical, economic, and social circumstances. Women who could physically access obstetric care frequently did so, evidenced by the strong effects of place-based factors in the regression analysis and in-depth interviews. This result indicates that facility availability and distribution plainly matter in choices regarding childbirth care. Among residents of the villages, Ulanga District is considered poorer than Kilombero, due to predominantly worse land fertility, food availability, employment opportunity, and NGO project involvement.
However, Ulanga has three more dispensaries than Kilombero and more women living in villages with a health facility – factors that, along with travel distance, were important determinants of the kind of care women used.

But outside of physical access, being socially and materially disadvantaged inhibited women’s ability to receive adequate treatment as well. Official or unofficial fees, vifaa, and transportation costs were all deterrents; women did not want their family to go into debt or be forced to work on other people’s fields to cover these expenses. Along with additional signifiers of inferior status (involving ethnicity, education, characteristics of male partner), being poor also involved steep social and emotional costs. Shame, both internally and externally derived, was enough by itself to convince some women to deliver at home. Uncertainty over whether safe care would be accessible at the health facility (for them) confirmed this decision for many more. Intricately involved in this social positioning was self-identity, which functioned in conjunction with other determinants. Indeed, many of the important factors in the study were tied to both relative wealth and self-identity (which also articulated with each other). This finding raises questions about degree of influence for multiple factors: is there a cumulative effect of motivators and detractors? Can a single factor override this effect? Is one combination more powerful than another? It is possible to make inferences for all these queries. However, the question women and families had to ask was whether using obstetric care was worth the cost of getting it. If the woman weighing this decision was poor or otherwise excluded, the logical response was frequently no.

The study also confirmed and explained effects of a number of additional influences on obstetric care use. Reflecting an amalgamation of age, prior experience, and self-identity, women’s parity exhibited a strong negative association with use of biomedical services.
Referral during antenatal care appeared to facilitate this behavior; women instructed by an authority to deliver at a facility were more likely to do so than those not referred. Not only did advance referral give women time to prepare for this action, but it also motivated a heightened sense of risk. It is no surprise that long labor and excessive bleeding incited women to seek care in facilities. This effect implies that women (and/or TBAs) understood symptoms that might indicate a problem at childbirth. Ethnographic data confirmed that, irrespective of education and wealth, women were quite savvy to danger signs – a conclusion also reached by a recent study in Malawi (72).

Statistics from the 2004-2005 Tanzania Demographic and Health Survey (DHS) help put these findings in the national context. By wealth quintiles, 73% of the highest group delivers in health facilities, whereas only 25% of the lowest group uses this care. An estimated 56% of women with complete primary education or higher deliver in facilities, compared to 31% of women with incomplete primary education and 27% of women with no education. Parity also shows expected trends, with nearly twice the women with their firstborn attended by professional providers as women having their fifth child. (73). While no quantitative indicators are reported for shame or discriminatory treatment in facilities, various public documents acknowledge issues of “self discipline” and “commitment” among health professionals, including national news articles and Ministry of Health strategic plans for maternal mortality (16, 74-76). Qualitative studies on childbirth in other parts of the country disclose these problems as well (16, 45, 77).

Both components of this study contained limitations. The primary constraint of the quantitative component was that a number of potentially key variables were not available in the dataset and therefore could not be evaluated. Specifically, these included indicators of
women’s autonomy, measures of individual wealth, and obstetric history items like previous complications and past use of obstetric care. The main limitation of the qualitative component involved communication. Although every effort was made to handle this problem (including intensive Swahili study and ensuring the presence of research assistants and key informants at most research interactions), minor misunderstandings were still possible.

Conclusion and Recommendations

This study takes important steps toward understanding how inequalities affect action. The depth and validity that follow from its mixed-method design allow for channels to be traced between identified inequalities and health behaviors. In particular, this work suggests that social and material differences among women in south-central Tanzania are important determinants of obstetric care use. Mrs. X could never represent these women. They are not passive, homogenous beings that uniformly seek and receive obstetric care once it is supplied. Nor are they oppressed victims who lack the capacity to decide and to act. Rather, as individual agents differentially positioned according to multiple markers of power, they negotiate between deterrents and motivators in immediate circumstances to secure the best care they can. In other words, they perceive, desire, embrace, reject, reinterpret, and experience obstetric care in different ways and for different reasons – most of which are closely tied to relative positioning in both family and community. The majority of women in this study wanted to deliver in facilities, but not at the expense of their economic, social, and emotional well-being, especially if physical neglect was also possible. Therefore, the broad assumption that all women want biomedical obstetric care must be tempered by the recognition that they do not want it at any cost – and that women with the highest costs (and sometimes the least benefits) are also the most disadvantaged. In the end, agency relative to
childbirth is situated in a realm of unequal power relations that shape, to a large extent, the kind of care that is used.

A comprehensive understanding of how childbirth processes play out in specific settings can lead to more effective maternal-newborn policies and programs. This occurs by identifying relevant differences among women, unraveling how these differences affect obstetric care use, and then applying these understandings to craft interventions that increase accessibility and acceptability of obstetric care for those who are disadvantaged. Not all factors are amenable to intervention in the study setting, but some recommendations can be made. First, the lack of accountability in the health care system to the people it serves must be reconciled – a complicated matter but one of utmost importance. In particular, providers must be dissuaded from demanding illegal payments and engaging in humiliating, abusive, or neglectful behavior. Government should also restore the supply of basic *vifaa* (ensuring these are fairly distributed to women) and run public campaigns to make communities aware of this. In lieu of an affordable and reliable transport system, TBAs need to be brought into the system as active contributors rather than excluded from it. Programs to improve the material status of poor women should also be pursued. Finally, every effort must incorporate community participation in order to sustain links between villages and facilities – a strategy successfully implemented in communities of northwest Tanzania (78).

With global health resources being invested in a push to achieve MDG-5, now is a critical time to realize that interventions focused on service supply, while necessary, are not sufficient. As the World Bank report *Reaching the Poor* concludes, what is needed are better approaches to service delivery (79). To generate these, we also need better research – more comprehensive studies that explicitly evaluate how women’s status and social disadvantage
influence use of services (70). Feminist scholars in Africa and elsewhere argue that
development strategies based on inadequate knowledge of women’s lives consistently fail,
and those that assume universal ideals reinforce global-local power relations that perpetuate
inequities (80-83). This lesson is also applicable to implementation of the current strategy for
reducing maternal mortality. To combat these results, Parpart and Marchand call for an
approach to development that “acknowledges differences, searches out previously silenced
voices, and recognizes the need for multiple interpretations and solutions to problems” ((84)
p.12). Taking special care to, as Lazreg suggests, recognize and portray women’s lives as
“meaningful, coherent, and understandable instead of infused by ‘us’ with doom and sorrow”
((85) p. 98), the approach to maternal-newborn health and survival should do the same.
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Chapter IV. “To Open Oneself is a Poor Woman’s Trouble:”
Embodied Inequality and Childbirth in South-Central Tanzania

Abstract

A variety of theories explain the production of embodied inequality, or how social and material disparities are incorporated within bodies and then expressed as uneven health outcomes in populations. However, specific pathways through which inequalities work to this effect are still not well understood. From a political economy perspective, the main mode of operation is institutionalized discrimination as it plays out in life events related to physical well-being. One such event is childbirth – an especially critical site of embodied inequality in resource-poor countries, where the burden of maternal death and disability falls heavily on women who are socially and materially disadvantaged. While it might be hypothesized that higher levels of poor outcomes in these populations occur through channels of chronic stress, persistent infection, or micronutrient deficiencies, this is not what I will show. Instead, I argue that the main pathway of embodiment involves the kind of care women can access – their conditioned choices for obstetric services and the differential treatment they receive in the biomedical system. Specifically, I use the concept of social exclusion to describe the situated processes by which political economy and power relations (at both global and local levels) make their way into women’s bodies. I draw on a particular theory of identity and agency to elaborate on these processes.

My purpose, then, is to examine production and embodiment of inequalities through the dilemma of childbirth in two rural districts of south-central Tanzania. Cases presented in
this analysis result from an ethnographic process of analytic induction that generated descriptions of typical practices through the perceptions and experiences of particular persons. These descriptions illustrate how states of social and material exclusion are produced at childbirth and show how such states, in turn, differentially affect women’s desires, decisions, actions, and treatment for this event. The findings demonstrate that, in a culturally produced figured world of childbirth, face-to-face claims on entitlement to obstetric care collide with enactments of discrimination at multiple levels, creating a space of contestation not only for physical well-being directly but also for social and material positioning that then influences health status. If the current agenda for global maternal health is to make obstetric care more available to childbearing women, finding ways to deliver services equitably must take priority. A system of health care that is accountable to the entire population it serves may, in effect, serve to disembodied inequality and thus improve maternal outcomes in a more even, more equitable manner.

**Introduction**

The small village dispensary had one room for laboring women and another for those who had already delivered. Although clean-swept, the cement floors were fractured with insidious cracks and entire chunks were missing from some corners. An open space at the juncture of wall and tin roof allowed for a few meandering strands of bougainvillea to make their way down the pale blue plaster. Each room was equipped with little more than two beds – rusted metal frames and lumpy mattresses covered with thin sheets of plastic. In the labor room three women hummed softly, rhythmically. Two rocked in bed and the other paced between them with back arched and hand pressed to the curve of her lumbar spine. Female relatives crouched outside in the shade of the crumbling porch, preparing chapatti and a dish
of coconut beans for their daughter, sister, or mother. Every now and then, a nurse-midwife would bustle into the room, pressing a fetoscope to one woman’s belly and throwing up another’s kanga to visually inspect for progress. “Mama, open your legs!” she commanded a woman wearing tattered yellow and green. “Hm. She is not ready yet,” came the proclamation, “I will come later.” Scolding the woman for being weak, she went back to manage the long line of mothers and infants waiting for vaccinations. The health aide, whose duty it was to monitor the laboring women, had left a few hours ago to get water from a nearby well. It was unclear when she might return, but an elderly passerby said he spotted her taking chai underneath the old mango tree near the market.

This scene was not uncommon. From the physical space to staff issues, it was one I had observed and participated in many times since arriving a few weeks earlier. What happened next, however, I did not anticipate. The woman in yellow and green beckoned me to approach. “Dada, tafadhali naomba unimesaidia kuweka godoro hili chinini?” she asked. Sister, please will you help me put this mattress on the floor? As an experienced nurse-midwife from the United States, my first thought was that she wanted to labor upright rather than lying supine. Together we lowered the mattress to the floor. “Excuse me, mama, but could you tell me why you want to do this?” She seemed surprised I would ask and then spoke quietly, “So the baby won’t fall off the bed if I deliver alone.” The room became silent and I noticed the other two women, both still in early labor, looking down at her. The young one with a red scarf and dangly earrings shook her head and clicked her tongue. Although I had not lived in the area for long, I knew enough to recognize this gesture as one of pity, a way of saying “poor thing.” The woman on the floor, who I’ll call Asha, did not deliver
alone. I remained in the room and attended the birth, an act that prevents me from knowing how things would have turned out had I not been present.

But there were many questions about this situation I couldn’t answer. By the time I stumbled onto the scene, the stage was already set. Clearly, I was missing something important. Why did Asha feel it necessary to move the mattress to the floor? Why did she suspect she would deliver alone? And why bother coming to the dispensary if this was the case? As for the other laboring women – were they worried they might also deliver alone? Or was there something besides their stage of labor that made them different from Asha? What was the role of the nurse-midwife? Where did cultural logics and local power relations come into play? And, farther removed but equally relevant, how did factors in the wider context affect the circumstances? This experience stayed with me throughout nine more months of fieldwork in the Kilombero Valley of rural, south-central Tanzania. My attempt to address these questions and understand the fundamental problems that underlie them proved to be a central catalyst for my research efforts, shaping my ethnographic study and the perspectives that will be presented in this paper.

Complications from pregnancy and childbirth continue to threaten the lives of women throughout sub-Saharan Africa, despite more than two decades of concerted efforts to quell the crisis (1-4). Because these complications tend to occur close to or during delivery, the current strategy of organizations involved in maternal health is to make some form of biomedical obstetric care more available to laboring women (5-8). For example, the main indicator for the UN Millennium Development Goal of achieving a three-fourths reduction in maternal mortality by 2015 is proportion of deliveries with “skilled attendants” – doctors, nurse-midwives, and nurses trained to handle obstetric complications (9, 10). In 2008, the
Tanzanian Ministry of Health and Social Welfare published a National Road Map Strategic Plan to accelerate this reduction of maternal deaths (2008-2015). Centered on the first page is a single clause that states, “When a woman undertakes her biological role of becoming pregnant and undergoing childbirth, society has an obligation to fulfill her basic human rights, which include the right to life, liberty, social security, maternity protection and non-discrimination” ((11) p. 2ii). While the right to life is undoubtedly essential, maternal health initiatives in Tanzania as well as in international agencies appear less focused on the remaining rights in this clause, which I will revise to read: the right to liberty and non-discrimination in the legitimate claim to social security and maternity protection. Of course, such entitlements are inextricably linked to physical security.

Because of the stakes involved, it is important to consider possible discrepancies between the Ministry of Health and Social Welfare’s declaration and the situation I came across in the dispensary. What rights were available to Asha and the other women there? How did they assert or relinquish these rights? What about the rights of women laboring at home? More complicated questions, to be sure. In order to answer any of them, a closer look is required. The purpose of this paper, then, is to examine production and embodiment of inequalities through the dilemma of childbirth – the problem of seeking and receiving care for a pivotal and recurring life event that, I will argue, makes women vulnerable to a range of transformations that include physical risk but extend beyond it. I will specifically address this aim by exploring situated processes of social exclusion that differentially affect women’s desires, decisions, actions, and treatment in relation to care during childbirth (both biomedical and “traditional”). Through experiences and perceptions of women, families, and birth attendants in the Kilombero Valley, I will describe everyday violations, reclaims,
and negotiations of the right to liberty and non-discrimination in struggles for social security, maternity protection, and life.

**Embodied Inequality – Processes and Production**

Embodied inequality is an interdisciplinary concept becoming important in a number of fields. Social epidemiologist Nancy Krieger defines this term as “how we incorporate biologically the material and social world in which we live” ((12) p. 672) and then express this incorporation in population patterns of health, disease, and well-being (13). The process of embodied inequality, therefore, is how social and material disparities are literally taken into the body and, I would add, into the self, producing uneven distributions of health and disease along these lines. There is a well-established assembly of evidence implying that socioeconomic position (variously defined but often independent of income) is a strong and robust correlate of health status across and within populations. A number of reviews cover this epidemiologic and demographic literature in detail (14-18). However, beyond the knowledge that social and material inequalities affect health outcomes, the multi-layered mechanisms through which these disparities are incorporated and expressed in bodies are not well understood. Again, quoting Krieger, “research explicitly focused on discrimination as a determinant of health is still in its infancy” ((13) p. 295).

Some key theoretical perspectives have emerged within the fields of social epidemiology and biological anthropology, each with a growing base of empirical support. Psychosocial theory hypothesizes that negative psychosocial factors translate into biological outcomes through the moderator of chronic stress and its endocrine sequelae. Persons and groups with psychological or social disadvantage may experience more exposure to repeated stressors than others and thus manifest poorer health (12, 19, 20). A theory of social capital
holds that density or proximity of social networks correlates with better health status, and persons living with a deficit of social cohesion will suffer worse health outcomes. This concept relates to the previous theory in that social capital can act as a buffer for chronic stress (21-23). A third theoretical perspective takes a political economy approach, asserting that differentials in health status result from an inequitable distribution of social and material resources – where privilege and disadvantage are produced and perpetuated by economic and political institutions. This theory is critical of value systems that exaggerate individual agency and blame the victim for his or her own health and economic situation (12, 24-28). Finally, some epidemiologists suggest more comprehensive theoretical frameworks that seek to integrate all of these perspectives (12, 23).

Medical anthropology also contributes much to an examination of embodied inequality. Many who work in this field seem partial to a political economy perspective but emphasize connections between large-scale social policy and local inequalities that affect people’s everyday lives, again including criticism of “ideological and political commitments that shape the environment within which policy is formulated” ((29) p. 453). These social scientists draw from Khaldun, Virchow, Galtung, Foucault, Bourdieu, Taussig and others to situate cultural practices within “historically delineated political-economic contexts,” where the idea of culture extends to issues of power and control surrounding health and illness ((30) p. 23). This lens is evident in the field’s guiding concepts and movements over time, including critical medical anthropology, political economic medical anthropology, and theories of violence ranging from “symbolic” to “structural” to “everyday” (30-34). More recently, Nguyen and Peschard have defined a “political anthropology of health” that attempts to reconcile culture, disparity, and disease by taking into account social change and
its driving forces in their approach to embodied inequality. These authors call for more qualitative methods in studying the association between social hierarchies and health outcomes that “inscribe this relationship into a broader historical and sociocultural framework” ((29) p. 450). They argue that only through an ethnographically driven approach can we interpret epidemiologic statistics and begin to truly appreciate how “local actors understand, enact, and respond to inequalities and, as a result, how these translate into embodied effects” ((29) p. 455).

A concept that can be used to theorize processes and production of embodied inequality is social exclusion. Originally developed by French sociologists to analyze social disqualification and disaffiliation in the republican tradition, this concept has expanded to other paradigms including Anglo-American liberalism and European leftist thinking in the vein of Weber (35). Broadly defined, it refers to the channels through which individuals and groups are, to some degree, excluded from the societies in which they live (36). As such, social exclusion is closely related to other conceptualizations of disadvantage that extend beyond a strictly economic definition of poverty, such as Amartya Sen’s “functionings” and “entitlements,” Peter Townsend’s “relative deprivation,” and Partha Dasgupta’s “economic disenfranchisement” (37). Proponents of this concept argue that its emphasis on distributional as well as relational aspects makes it well-suited to reveal mechanisms of institutionalized marginalization while still acknowledging the agency of the excluded (37-39). Social exclusion thus refers to multiple dimensions of discrimination, including differential access to social and political structures as well material resources. Like Paul Farmer’s “axes of oppression” (32), it considers the simultaneous and inferior positioning of social categories such as gender or ethnicity across a range of times, places, and degrees (37). However, while
this concept may reach deeper than economic deprivation, it does not neglect it. As Farmer reminds, grinding poverty remains the crosscutting cause of suffering for many oppressed peoples and groups (32, 40).

Social exclusion occurs at a variety of sites and levels. Although rooted in Western Europe, this concept is also relevant for non-industrialized contexts. For example, Charles Gore from the International Institute for Labor Studies (UN Development Program) has published a literature review on social exclusion in sub-Saharan Africa (41). More specifically, Kaijage and Tibaijuka offer a study on how this concept applies to Tanzania (42). Social exclusion also operates on multiple levels of political economy. For example, macro processes of exclusion shut out entire nations or communities from political power, social recognition, and material wealth. Global institutions that operate on this level include colonial rule and postcolonial structures that maintain underdevelopment and dependence on foreign aid. Also included are nationalist factors that affect the relationship between citizen and state, like corrupt government or bad economic and social policies. Regarding health outcomes, these macro processes lead to what Frenk, et al. call a protracted-polarized model of the epidemiologic transition, where relatively poor countries are saddled both with diseases prevalent in wealthier nations (cardiovascular disease, cancer, accidents) as well as the “left over ills” that were never stamped down (entrenched infectious diseases, malnutrition, maternal mortality). These authors also note that, in almost any place where funding for health services is grossly limited, it’s the latter category that tends to lose out (43-45). As Silver states, “social exclusion arises from an interplay of class, status, and political power in a way that benefits the included” ((35) p. 543).
Social exclusion can also be traced to the micro level in the everyday experiences of people and groups within families and communities. Exclusion on this level occurs not only from scarce material resources and denial of rights but also because specific circumstances and personal histories have not provided the motivation or the opportunity to belong (39). But these processes should always be situated within wider relationships of power and control. Concerning the link between macro and micro, Abu-Lughod explains that, “the effects of extralocal and long-term processes are only manifested locally and specifically, produced in the actions of individuals living their particular lives” ((46) p. 150). A good example of this link is provided in Green and Mesaki’s work on poverty, “modernization,” and anti-witchcraft practices in southern Tanzania – the same setting as my own project. Following from Arjun Appadurai’s writings on collective imaginaries of modernity as mediated through global flows (47), these authors consider how shared ideas of modernization, shaped by national aspirations for economic development, play out in local responses to witchcraft (48). However, while reciprocal relations of global and local must be accounted for, these spheres can be distinguished from one another. I will use Ginsburg and Rapp’s definitions of these terms, where global processes occur when “arenas of knowledge and power escape the community of their creation to be embraced by or imposed upon people beyond those communities,” and local spheres include any “small-scale arena in which social meanings are informed and adjusted through negotiated, face-to-face interaction” ((48) p. 9).

Through these small-scale arenas situated in wider contexts, we can explore micro processes of social exclusion that produce embodied inequality. In examining these processes in relation to health, Mackintosh describes patterns of inequality as framed by legitimizing
conventions of thought that are upheld by social institutions (such as health care systems) that themselves become bearers of broader deprivation and privilege (49). But individuals do not automatically comply with taken-for-granted cultural logic or relational ordering; instead, they resist, revise, challenge, accept or otherwise act, improvising within what Bourdieu describes as “concrete indices of accessible and inaccessible, of what is possible and not possible ‘for us,’ a division as fundamental…as that between the sacred and the profane” (50) p. 64). A theory of identity as put forth by Holland, et al. helps to explain how this works. According to these authors, identity is comprised of the multiple self-understandings people hold in relation to culturally and socially constructed “figured worlds” – collective interpretations of small-scale, local arenas in which specific characters are recognized, significance is assigned to particular actions, and certain outcomes are valued above others. Cutting across these worlds are aspects of identity that concern one’s position relative to others – one’s sense of social place and entitlement that hinges on power, status, privilege, disadvantage, and the navigation of these. The bounds of agency therefore hinge on identity as constructed in relation to both figured worlds and social position; constraints and possibilities for behavior are determined by the shifting landscape upon which these processes get worked out (51).

*Embodied inequality and childbirth*

The childbirth event, or the intrapartum period, is a site of social exclusion where embodied inequalities are produced and expressed. Life-threatening complications in pregnancy, which usually occur during or close to delivery, include hemorrhage, obstructed labor, ruptured uterus, infection, and hypertensive disorders. In the vast majority of cases these problems are completely treatable, given appropriate obstetric intervention (5, 6). At
the macro level, differences between rich and poor countries are greater for maternal mortality than for any other health indicator (52). More than 99% of pregnancy-related deaths take place in developing countries, and nearly 70% occur in just 13 (1). Among these countries is Tanzania, where women face an estimated one in 10 chance of dying in their lifetimes from pregnancy-related complications – compared to a one in 4,000 risk for women in industrialized nations (4). Within poor countries, differentials in access to biomedical obstetric care fall along socioeconomic lines. In the World Bank Health and Poverty Studies of 56 developing nations, Gwatkin, et al. found that rates of delivery with professional providers were far higher among wealthy than poor groups (as measured by asset quintiles) and among women with more education compared to those with less. Again, these disparities were significantly greater than those for use of other health services, including antenatal care, child immunizations, and family planning (53-55).

On a somewhat more intermediate level of assessment, quantitative data from smaller population-based surveys indicate a number of factors affect access to and use of biomedical obstetric care. Multivariate analyses in sub-Saharan Africa, the Near East, and Southeast Asia also demonstrate a significant positive effect between household asset quintiles and use of obstetric care (56-65). Other variables shown to be important include: sociodemographic factors such as age, parity, ethnicity, marital status, education, and head of household’s occupation; health system factors like cost, distance to and distribution of facilities; proxies for women’s autonomy like household decision-making and access to material resources; obstetric history factors such as past complications and type of care previously used; and measures of knowledge and beliefs around childbirth. A review of the evidence for these variables is provided in a separate report (66), but it should be noted here that studies on
maternal health services use often find discrepancies in antenatal versus obstetric care, where the great majority of women have attended at least some antenatal visits but less than half deliver in health facilities (67, 68). However, as good as this research may be at providing broad numerical trends and indicators, most of it does not go very far in interpreting or explaining the patterns it detects.

Research based on ethnographic methodologies allows for greater insight into what is happening on the ground. For example, Goldman and Pebley found that obstetric care use in Guatemala was statistically far more complicated than immunization use; with supplemental ethnographic material from rural communities, they were able to attribute this effect to trust and respect across class and ethnicity in a setting of therapeutic pluralism – factors that did not interfere with child immunizations (69). Medical anthropologists have long considered matters of reproduction to be uniquely complex, in that the act of bringing new members into a society is at once essentially social as well as biological (70-75). At the same time, childbirth is both dangerous and mundane, exhibiting elements of dire risk alongside aspects of utter normality. Because of these co-existing qualities, it should be no surprise there is so much controversy around how childbirth should be “done,” even in environments that limit how it can be done. In the current era of globalization, conflicting views on how to approach childbirth are not limited to childbearing women, the persons assisting them, or even the institutions creating relevant policies. Different perspectives also extend to those of us who study this event, affecting how we think about it and which sides of it we choose to present. Reflexive ethnography is capable of accounting for all of these angles, producing a partial truth that captures its object of study but also locates it in the personal perspective of the researcher (76, 77).
Situated, micro-level processes of social exclusion specifically involving childbirth are not well studied. However, a number of works examine these processes in relation to human reproduction and women’s bodies. In exploring how reproduction is structured across social and cultural boundaries and at local-global intersections, Ginsburg and Rapp employ the term “stratified reproduction” to describe the unequal power relations by which “some categories of people are empowered to reproduce while others are disempowered” ((78) p. 3). Using Foucault’s theory of biopower, Lock and Kaufert consider multiple (and frequently contradictory) ways in which women respond to various reproductive technologies in fields of inequality that are reinforced by medicalizing discourse and practices (74). More specific to childbirth is Jordan’s concept of “authoritative knowledge.” This term refers to the knowledge within a figured world considered legitimate to justify a given behavior. By presenting a face of morality and rationality, it is the understanding that counts in a specific circumstance such as childbirth. This knowledge can become prominent (and sometimes hegemonic) in situations of medical pluralism, causing the devaluation of other kinds of knowing and exclusion of those who subscribe to such knowledge. Therefore, the creation of authoritative knowledge is an “ongoing process that both generates and reflects power relationships within a community of practice” ((79) p. 56).

There is a host of qualitative studies in public health and anthropology that relate to authoritative knowledge and childbirth, describing how biomedical and indigenous ways of knowing bump up against and intermingle with each other in diverse localities and contexts (68, 71, 73, 75, 80-95). Much of this research examines power relations in terms of contested knowledge; however, it does not necessarily address these directly with respect to embodied inequality. There are a few notable exceptions. Similar to Sargent’s findings in Benin, Grace
Kyomuhendo explains how home delivery in rural Uganda improves social position in one of the last domains where women still command power. Conversely, facility delivery is a mechanism of exclusion in that women who use this service are often stigmatized as lazy and thus undeserving. Both authors point to poverty as a factor that conditions these perceptions (75, 88). In another study, Pitchforth, et al. describe disturbing differences between the experiences of poor and well-off women seeking emergency obstetric care in Bangladesh. Although it doesn’t speak to the production of social inequality, this research reveals how the act of acquiring biomedical care reinforces material inequality and uneven chances of survival through differential treatment, unfair payment schemes, and debt incursion (96).

In summary, a variety of pathways exist through which social and material disparities may be incorporated within bodies and then expressed as health outcomes with inequitable distributions. From a political economy perspective, one such channel is institutionalized discrimination as it plays out through processes of social exclusion that operate on local and global fields of power. Childbirth is a critical site for exclusion of and among women, as suggested by research in both public health and anthropology. While it is unknown whether or to what extent chronic stress shows up as a pregnancy-related complication such as pre-eclampsia, processes of social exclusion most certainly affect who is best prepared for childbirth, the kind of care that is sought and obtained for it, and the quality of care that is received. However, precisely how this unfolds in commonplace lives and practices remains vague. Even less well-understood are the ways that women and families respond to potential exclusion (or inclusion) in moments when the outcome is uncertain. In a figured world of childbirth, face-to-face claims on social security and maternity protection collide with enactments of discrimination at multiple levels, creating a space of contestation not only for
physical well-being but also for social and material positioning. As occurring in rural villages of south-central Tanzania but situated within wider spheres of influence, this is the dynamic that my own ethnographic work examines.

Study Setting – Tanzania, the World, and the Kilombero Valley

In laying out the evidence for processes of social exclusion in sub-Saharan Africa, Gore specifies four inter-related levels: household, local State or community, national State, and transnational regimes. I’ll start with a brief mention of the latter, which Gore sums up by referencing the idea that sub-Saharan Africa is fast becoming a “global ghetto” (41). There are volumes of writings describing the legacy of colonial rule in this region. Many of these works support the argument that colonialism and its inherited authoritarian institutions set the stage for a subaltern position in the world and ongoing economic servility following political independence (97-103). Pertaining to this position in more recent times, other writings point to the marginalization of sub-Saharan Africa in foreign relations and to the deleterious effects that international development, debt, and aid policies have had on the region’s struggle for democratization and economic sovereignty (104-107). In particular, criticism is aimed at structural adjustment programs for expanding the gap between rich and poor and overburdening/under-supporting women and children (42, 108-110). According to Bloom and Lucas, the consequence of these programs for health services is a weakened formal sector with accelerated informal marketization, where the typical outcome is run-down, ill-equipped facilities with drug shortages and staff who have “worked for inadequate pay with little supervision for years” ((111) p. 27). Of course, there is also a gender dimension to this relegation; both feminist and Africanist development scholars document the comparatively negative effects of transnational forces in the lives of African women (112-117). As an
excluded nation among the poorest of the world and least developed in sub-Saharan Africa, Tanzania is no exception to any of this. Of its current situation, Green and Mesaki describe the country as being “wholly enmeshed within the new political relations of development assistance structured around poverty reduction and liberalization policies” (48) p. 373).

Besides being among the excluded, however, the nationalist State can simultaneously act as a vehicle for exclusion. According to Gore, the main resources involved in social exclusion in Africa include agricultural land, agricultural livelihood, formal and informal employment, and organization and representation (41). I would also add social services such as education and health care to this list. Regardless, whether it be through good policies that are not enforced or badly conceived ones that are, the political and legal structures of the State play a role in shutting people out from access to the above resources, serving as a strong force for embodied inequality. Kaijage and Tibajuka do a thorough job of documenting social exclusion within Tanzania. From Nyerere’s professed egalitarian policies and visions of inclusion vis-à-vis ujamaa to the nation’s own structural adjustment measures and subsequent attempts to revive the social sector, these authors evaluate various impacts of development and anti-poverty strategies post-independence. They consider how the quest for economic growth and transformation often conflicts with goals of equity and social justice, and how some policies and programs have further marginalized persons of already low status. These authors pay particular attention to the plight of women and the rural poor, examining how State allocation of land resources and social services has been especially damaging for those who fall into both of these groups (42).

In addition to processes of exclusion within the State, Kaijage and Tibajuka also look at ways in which these take place within local communities and families. Even though the
evidence base is severely lacking, they specifically review research indicating intra-rural inequality and suggest functional mechanisms for this, including unequal access to land/productive inputs through administrative and customary practices and unequal access to paid labor through gender-biased decision-making power within households. The authors’ qualitative study of select marginalized groups provides additional evidence for the production of relative deprivation on the micro level (42). Another in-depth look at these processes among Tanzanian women is given in a collection of life histories edited by Ngaiza and Koda, titled *The Unsung Heroines* (118). But an especially nuanced perspective can be gleaned by returning to the work of Green and Mesaki. In exposing the links between national and local aspirations for *maendeleo* (development), these authors explain how recent public reform policies enacted by the government are not merely a system for delivering public services. They are also part of an “explicit transfer of moral and political values associated with neoliberalism” in aid-recipient countries, where “the new subject is a citizen of a multiparty democracy living in a free-market society” who uses purchasing power to improve his or her lot ((48) p. 380). *Maendeleo* thus becomes a personal achievement signified by better housing, more consumer goods, and an urban sensibility that disparages rural customs. “Poverty is antithetical to development in this sense, as it contravenes the representation of modernity the State is trying to promote through reform programs” ((48) p. 381). But for many, success in this struggle is realistically perceived as dependent on factors beyond an individual’s control. In this setting, witchcraft offers an explanation for why some people fail to achieve and instead fall into poverty even more severe than that of the general context. It also offers excluded persons who feel bitter and jealous a way to thwart those ahead of them on the path to progress. Suspected witches,
therefore, are likely to be among the most disadvantaged members of community – a coincidence that gives the better-off further reason to shun this group (48).

Before presenting my own examination of social exclusion in this same location, a description of the setting specific to this work is warranted. The Kilombero Valley is located in the Morogoro Region of south-central Tanzania, bordered by the Selous Game Reserve to the east and Udzungwa Mountains to the northwest. Its rural geography consists of African savannah with alternating dry and rainy climates throughout the year. Fringed by mikumi palms, the impressive Kilombero River churns along the valley floor, providing irrigation for rice paddies and marking the political boundary between its two adjacent districts – Kilombero and Ulanga. From earliest record the Ndamba and Pogoro groups occupied this valley; fishermen and rice farmers who also inhabited the Mahenge Mountains to the south. Even before Tanzania’s independence in 1961, nearby groups such as Bena and Hehe began migrating to the area for its fertile soil. Since the end of British rule, people have migrated from all parts of the country to farm the Kilombero plain, one of the largest seasonal wetlands in East Africa (119). During the last decade, the lush, humid valley has also been occupied by South African-owned companies producing sugar and teak exports.

The particular setting for this study comprises 25 villages within Kilombero and Ulanga that make up the Ifakara Demographic Surveillance Site (DSS). This specific DSS, an INDEPTH site administrated by the Ifakara Health Institute (IHI), routinely collects data on pregnancies, births, deaths, migrations, and other health-related events. At present, the population of these villages totals 94,000 people scattered over 1,440 km² in the Kilombero District and 1,000 km² in Ulanga (120). The current inhabitants are ethnically diverse, representing the well-established groups of Ndamba, Pogoro, Bena, Hehe, and Nyakyusa as
well as smaller, semi-nomadic groups such as Sukuma and Maasai. The population is also
diverse with respect to religion; Christian, Muslim, and indigenous practices are prevalent
throughout. Agriculture, fishing, and petty trading form the basis upon which most people
earn their livelihoods. In 2001, mean household expenditure was $77.00 per month (121).
Even apart from semi-nomadic groups, the population is highly mobile; most families travel
to *shamba* (farms with second homes) for weeks at a time during the long rains. Some
residents also migrate to urban areas for regular wage work. The total fertility rate is most
recently estimated at 5.3 births per woman and the maternal mortality ratio at 500 deaths per
100,000 live births. Approximately 49% of all pregnancy outcomes occur at home while 51%
take place in facilities. However, over 95% of pregnant women have at least one antenatal
care visit, with most of these receiving three or four check-ups (120).

Throughout German and British rule (1880s-1961), mission health posts and colonial
facilities provided limited health care to indigenous populations in what was then Tanganyika
(122, 123). Public maternal and child health services after independence were initiated in
1974, bolstered by a strong primary care program under Nyerere. This program deteriorated
in the 1980s, however, due to a diversion of health funds to the failing economic sector.
Renewed financial commitment to public health did not occur until the post-structural
adjustment period of the mid-1990s, when economic reform plans designed to halt the
decline were enacted (124). By this time Tanzania had adopted the Safe Motherhood
Initiative and created a Reproductive and Child Health Section (RCH) within the Ministry of
Health. The current decade has seen various specific attempts to address maternal-newborn
health through federal strategies partnered by private nonprofit organizations. Authored by a
coalition of government and donor agencies, the latest is the National Road Map Strategic
Plan referred to in the introduction. In keeping with the Millennium Development Goal for maternal health, one of its main aims is to increase the proportion of deliveries with skilled attendants to 80% and level of hospitals and health centers with emergency obstetric care to 100% by 2015 (11). The most recent national estimate for the former is 46% and for the latter, 65% for hospitals and 6% for health centers (125, 126).

Maternal-newborn services are now implemented through the country’s pyramidal health system that employs RCH supervisors at national, regional, and district levels. However, remnants of colonial structures and decades of foreign aid projects make their way into this system through private and parastatal facilities that operate alongside public hospitals, health centers, and rural dispensaries. A varied network of government and mission health facilities provides obstetric care to the population of the Kilombero Valley; in the villages where I worked this included two district hospitals, two health centers, and 11 dispensaries. Largely a result of the messy processes of development, delivery attendants that could be classified as biomedical took on a wide array of forms: physicians, interns, advanced medical officers, clinical or rural health officers, nurse-midwives, nurses, an assortment of health aides, and even, at times, housekeeping staff. Due to additional health system factors involving training, supplies, and supervision, the abilities and availabilities of these personnel were equally varied. On top of this, community providers called *wakunga wa jadi* (known as traditional birth attendants or TBAs in discourses of development) actively conducted delivery services in women’s homes and sometimes dispensaries. All in all, the picture comes very close to Bloom and Lucas’s portrayal of the pluralistic health sector in most of the region – a patchwork of less-than-adequate formal services, strengthening informal markets for health care, and hundreds of variations in between (111).
Research Methods

Fieldwork for this study was conducted from September 2007 through June 2008, with a six-week break at the mid-point. Data collection methods included participant observation and semi-structured interviews. Although I utilized both methods in all 25 villages, for the former I focused on three central villages in each district. Informal interactions included women ages 14 and up with prior childbirth experience, their adult family members, and obstetric providers. They typically took place in the courtyards of women’s homes, the fields in which they worked, and health facilities where some of them delivered. Throughout fieldwork, I also volunteered clinical nurse-midwifery skills in local facilities and was able to supplement my perspective from that angle. Additionally, time was spent observing and talking with TBAs. A number of key consultants facilitated the participant observation process, organizing my entrée into village life and offering perspectives on observations and interactions. Rough jottings were taken during all research encounters; these were systematically developed into a growing body of detailed fieldnotes as my understandings evolved. My research assistant, Christina Makungu, was instrumental in all aspects of data collection and was with me for most research encounters (but not necessarily when I worked in a clinical capacity). Originally from the area, she also acted as interpreter; although I have studied Swahili intensively and possess reasonable skills, my abilities did not allow me to pick up on local nuances.

Formal interviews were conducted with 48 women throughout the villages who delivered within the previous six months. Study participants for the first 16 interviews were identified in participant observation; these women varied on delivery place as well as social and material status defined by local standards. The remaining participants were identified
from the DSS database and the Postpartum Interview Study, a population-based survey collecting data on maternal-newborn health at the time of my fieldwork (conducted by IHI and the U.S. Centers for Disease Control and Prevention). Potential participants were evenly split by district of residence and delivery type, where half used obstetric care and half did not. These groups were then further stratified by material status using measures of household assets. Finally, I attempted to obtain variation on sociodemographic factors, including age, parity, marital status, education, ethnicity, and religion. This “stratified purposeful sampling” is used in mixed-methods research when an investigator wants to ensure inclusion of certain cases that vary on pre-selected parameters (127). It was used here to examine fluctuating social and material positions in relation to childbirth as construed by either community standards or statistical categories.

Broad interview topics remained the same throughout data collection, covering women’s stories of their most recent and other births, views of locally available childbirth services, perceptions of inequalities and effects on obstetric care use, and conceptualizations of childbirth and risk. Groups often formed spontaneously around interviews, as curious relatives and neighbors would gather and want to voice their opinions. If an interviewee privately gave consent, these individuals were allowed to participate but questions remained directed at the interviewee. Fieldnotes were taken in regular post-interview discussions and added to the bottom of transcripts. All interviews were conducted in Swahili and recorded with a digital audio-recorder; these were translated and transcribed within two weeks. Back-translations were performed on random five-page segments to check for accuracy.

Initial qualitative analyses were performed in conjunction with data collection. This occurred in the iterative process of generating hypotheses through writing fieldnotes, testing
these ideas with participant observation and in-depth interviews, and then revising the evolving theoretical “model” to better fit the most recent observations. For example, I noticed the practice of facility providers demanding *vifaq* from laboring women (described below), and then began to focus in on this as well as other related practices of social exclusion. This process was repeated until the model – consisting of salient categories and their relationships to each other – demonstrated consistency with respect to new observations and interactions. After leaving the field, a final analysis was conducted that involved re-reading fieldnotes and transcripts chronologically in order to get an overall sense of the work, then indexing these “datasets” according to the most recent categories with the software program HyperRESEARCH. Last, indexed categories (now themes) and their relationships to each other were refined and illustrative descriptions written, using pseudonyms assigned to all research participants. The individual cases presented in my analysis below therefore result from a process of analytic induction that generated descriptions of typical practices through the situations of particular persons.

My own ethnographic approach, I hope, has followed from Abu-Lughod’s suggested modes of writing against culture. This includes a focus on practice rather than a depiction of subjects as coherent and timeless “others.” It means making an “ethnography of the particular” that moves away from authoritative generalizations to tell stories of people in a specific time and place living their lives through moments of joy, sorrow, hope, fear, uncertainty and ambivalence. Finally, it requires recognition of the connections between self and study, including an awareness of personal positioning relative to that of the people one is studying and living among (46). This reflexive self-referencing allows a researcher to account for the active role she plays in constructing data. According to Davies, transparency
in acknowledging one’s own dynamic lens as not value-free makes partial truth possible. After all, it is subjects’ realities that are ultimately fashioned through the researcher’s eyes, even if meanings and interpretations are co-produced between them (77). I aimed to practice reflexivity at every stage of this research, with sometimes more and sometimes less success. As I moved among people with fairly distinct if not entirely different realities from my own (and utterly inequitable in many respects), I tried to gauge how various aspects of my self influenced my perceptions – as well as people’s perceptions of and responses to me. Finally, I have attempted to write all of these efforts into my analysis.

**Kujifungua and Embodied Inequality**

I will now turn to pathways through which social exclusion at the site of childbirth produce and perpetuate embodied inequality in the Kilombero Valley. Although my work does not focus on particular imaginaries of the modern as manifested in anti-witchcraft practices, my experience in this setting supports Green and Mesaki’s depiction of struggles for personal development and responses to misfortune. As these authors put it, people in this part of the world “engage with current notions of modernity in all kinds of ways, from accessing debates on the radio to making use of modernized facilities at hospitals to choosing to keep ‘modern’ breeds of chicken” ((48) p. 384). Here I will argue, however, that not only does care during childbirth create an opportunity for people to perform modern identities, it also opens up a space of acute vulnerability to social and material degradation as well as increased exposure to physical risk. How women of differing social and material positions navigate and respond to this vulnerability is an additional focus.

Common Swahili for childbirth is *kujifungua*, which literally translates as “to open oneself.” In the villages where I worked, the recurring act of opening oneself is an integral
event in most women’s lives. Of course, it is not their only concern or even one that weighs on their minds every day – unlike matters of food production, malaria prevention, family relations, and other work of survival and meaning. However, given high rates of fertility and child mortality in this agrarian society, it certainly occupies a significant place in the life course of many. Childbirth poses a particular, even central, dilemma for women who are disadvantaged. This understanding crystallized for me one day while talking with Mwanmisa, a woman who was preparing to walk 15 kilometers to her rice paddy. We were concluding a general discussion about access to health facilities when she suddenly stood straight, staked her hoe in the dirt, and exclaimed “Ehh-heeh! To open oneself is a poor woman’s trouble! Obviously, it is a problem for everyone, but if you are poor like me… all we can do is pray to God!”

Producing states of exclusion at childbirth

Through a selection of stories and experiences, I will now explore why the dilemma of childbirth is indeed greater for women who are disadvantaged, perhaps offering insight into statistical patterns of maternal health indicators in broader populations. But before talking about how social and material inequalities are expressed as uneven physiological outcomes, it is necessary to look at how they are created and reproduced (including which ones matter in determining relative positioning). Such understanding is critical because I am arguing that, in the case of maternal health among women in the study setting, one of the main pathways through which inequalities are embodied is that of social exclusion. Particular states of exclusion and inclusion are produced and reinforced at childbirth through processes that occur simultaneously at macro and micro levels and on external and internal dimensions. These unequal states are not fixed positions to which women passively succumb; instead,
they are entities constantly reforming in response to changing conditions, specific practices, and interpretations of actors. But however ambivalently, at least for a time they become resolved enough to affect real physical outcomes. Therefore, it is the production of these states that I focus on in this section. The order in which I present my illustrative descriptions reflects both the factors appearing most salient for childbearing women as well as the chronology of my own deepening understandings.

What about the *vifaa*?

Sakina arrived at the health center on the back of a rented bicycle. Her husband, Ayoub, had managed to maneuver it across 20 kilometers of rutted road. Because she was pregnant with her fourth child, she was instructed to deliver at the health center as opposed to the dispensary ten minutes from where they lived. They were drenched with sweat when they presented at the labor ward – he from the pedaling and she from the contractions that had become much stronger since they set off that morning. They were both grateful it wasn’t the rainy season and that her labor was longer than usual. A portly nurse-midwife in a white government uniform stepped out to greet them. Looking the pair over, she asked “*Habari za vifaa*?” What about the *vifaa*? From out of her blouse, Sakina produced one pair of gloves and a folded *kanga* that had clearly been used. She handed them over while turning her face away. “Is this all?” demanded the nurse, “Where are the rest?” Sakina did not speak or move. It was the wrong answer. The nurse began a barrage of strident scolding, asking the woman and everyone else milling about how this mama could be so irresponsible, how could she even think to show her face here and expect help? Again and again she was told at her antenatal visits to have the *vifaa* ready, but no, this mama couldn’t be bothered. Lazy and disobedient, that’s what she was. Ayoub thrust his wife’s antenatal card into the nurse’s
hands, pointing to the green star indicating she should deliver in a health center or hospital. “She can deliver here when you find the rest of the vifaa. Until then, she can wait.”

Ayoub got back on the bicycle and frantically rode to the homes of their relatives in the village to try to collect what he could. He needed soap, a basin, a razor, some cotton wool, a plastic sheet, and if he was lucky, a few more kanga. Best to get kerosene as well. Sakina had prepared a few of the items early in pregnancy, but she used the basin when their young son had a bout of diarrhea and lent the razor to another pregnant mama who had not yet replaced it. The rest they couldn’t afford – especially three dots of new kanga, which would have cost the family 15,000 Tanzanian shillings ($18.00 USD) alone. When he managed to borrow a basin, razor, and bit of soap from the neighbor of a relative and purchase cotton wool from a nearby pharmacy (which was out of gloves and sheets), he rushed back to the health center. But by this time, Sakina had delivered the baby boy alone in an empty examination room. Upon hearing the cries, an elderly aide who was happening by came in and cut the umbilical cord, then helped to dry and wrap the infant. The couple readied to leave, planning to stay the night at a relatives’ place before making the trip back to their own village. As they reached the veranda, the nurse appeared and asked Ayoub to pay for the razor and gloves used to cut the cord. Before benches full of on-lookers, he gave her the borrowed razor and a crumpled 500 Tsh note. Sakina started down the path leading away from the health center, limping only slightly.

During my first weeks in the Kilombero Valley, I frequently found myself asking “what about the vifaa?” as well. At this point is should be clear that vifaa, Swahili for “things,” refers to the collection of items that biomedical providers require women to bring with them for delivery in health facilities. Every time I inquired about the main difficulties
involving childbirth, or about what might be done to improve services for women, I ended up in a lengthy discussion about the *vifaa* – a topic I was tiring of until a key informant, an RCH coordinator, tipped me off to how critical it was. She said it almost in passing, in the middle of a conversation about why women deliver at home. “You know, many are ashamed if they can’t get *vifaa* or clean *kanga* to wear. They stay home because they don’t want others to know of their hardships.” After this comment, I listened more carefully to stories like Sakina’s about how difficult it was when a woman went to a facility deficient in these items – women turned away at the door, who were delivered by their mother in the labor ward, who were humiliated and/or neglected for hours, and who were made to pay the cost of supplies they lacked. I also put more effort into observing interactions involving *vifaa* at health facilities and made attempts to obtain them myself. When Christina went to buy them at a *kanga* vendor and *duka la dawa* (pharmacy) in one village, she spent close to $30.00 USD with two items still missing. Not until weeks later did it became apparent that the clinical officer in charge of the local health facility also owned this *duka* – an arrangement that, we would learn, was not coincidental or unique to this village.

Slowly the pieces came together as to what was happening with the *vifaa* – local significance as well as connections to wider institutions. The requisite that women provide their own delivery supplies was recent, initiated only in the past few years. Prior to this, women brought nothing but a few old *kangas* to clean and wrap the baby with. Ever since the government adopted WHO’s Focused Antenatal Care (FANC) package, however, women started being told they must bring *vifaa* in order to receive services. Part of FANC instructs providers to establish a birth plan with pregnant women, including where they should deliver and how they might get there. It also involves reviewing a list of back-up supplies *in case*
they end up delivering outside of a facility. But this intervention became something very
different in a setting where the supply shortage was so severe nurses had to conduct
deliveries with condoms on their hands. Notable inefficiencies in the Medical Stores
Department (MSD), a division of the Ministry of Health from which facility staff ordered
supplies and drugs, had been preventing health personnel from doing their jobs for years.
Coupled with the threat of HIV and increasing awareness of its prevention among health care
workers, FANC’s birth plan component couldn’t have come at a better time. To be clear,
there was never an official policy that women bring their own delivery items to government
facilities, and RCH personnel were opposed to the practice. On the contrary, all public
services for pregnant women and children under the age of five were supposed to be free.

Obstetric providers obviously benefit from this improvised regulation. Requiring
women to bring their own *vifaa* enabled providers to conduct clean deliveries while not
having to worry about infectious disease. In a sense, this was an improvement for laboring
women as well; having *vifaa* ensured that basic supplies were available and that a dirty razor
wouldn’t be used to cut the cord. But providers in some facilities were extending the required
items to include general support, such as large amounts of kerosene and disinfectant. Others
insisted women purchase antenatal cards and essential drugs, both freely distributed to
facilities (albeit unreliable). It would not be a surprise to see an elderly woman running down
the street to buy oxytocin from the pharmacy because her daughter-in-law was bleeding
heavily in the dispensary. To complicate things, there was a growing trend for providers to
own pharmacies in the villages. This conflict of interest was not lost on local residents.
People complained bitterly about seeing the MSD truck pull up but then arriving at the
dispensary only to be told to purchase the medication at the provider’s *duka la dawa*. It is
entirely plausible the drug they needed was not brought in by MSD that day – but it was also quite possible that it was. Although the rule of *vifaa* and its effects largely took hold in government facilities, small mission dispensaries were also starting to catch on.

All these changes were taking place in a climate of federal deregulation that accompanied the national goal to become a more developed capitalist democracy – a condition that contributed to the production of inequality. For example, many facility providers applauded each other’s efforts to get ahead and felt entitled to their actions. “Owning a business is the way of the modern world,” one explained, “you must work hard to improve your life.” As for how they viewed the *vifaa*: individuals must strive for self-reliance (an often-used term in Nyere’s socialism) and if some don’t want to work, instead trying to disobey orders and get away with lazy behavior, the consequences are their own fault. Relatively well-off villagers were more ambivalent; some who could easily afford *vifaa* held opinions similar to providers, but others genuinely fretted about what the rule was doing to poor women, and what it might do to themselves should they become poorer. It is not difficult to see how this requirement pushes already disadvantaged people into further exclusion. Sakina and Ayoub worked hard last season to produce a surplus crop, but their *shamba* was in a drier part of the valley, the rains came late, and they had little left to sell. Their position as poor villagers and inadequate farmers was reinforced by the (lack of) care they got at the health center. Insufficient *vifaa* marked them as lazy, disobedient, and inferior – all publicly demonstrated and justifiable of commensurate service in the eyes of authority. Therefore, given the context of limited resources, HIV/AIDS, and emerging capitalism, the global FANC policy (as filtered down through national programs and adjusted at the local level) dealt a hefty blow to some of the women it intended to help.
“Asante kwa nini?”

“Yes, we know care is supposed to be free! We walk into the dispensary and there are posters on the wall that say this.” We were sitting with a group of five in the frame of a small brick house that was never completed. A frangipani shrub sprouted from the would-be floor and the leaves of an enormous cashew tree provided a roof. Rosi, a young woman with a pale pink leso wrapped around her head, continued, “But then in front of these very posters, the nurse or doctor will hold out their hand and say ‘Don’t be selfish, we helped you deliver. You need to give us something for that. You need to say asante.’ So what can you do?”

“Does the government truly want to help women and children?” asked Mariam, an older mama in a turquoise kitenge. “Let’s be honest,” chortled Teofrida with hazel eyes, “they only want to help themselves!” “Yes, to buy more fancy shoes because they’re too special to go barefoot!” Everyone laughed uproariously, but the voices were hard at the edges. The son of Mariam, a boy of eight or so, brought several young coconuts to sip on, leaving a panga to scrape out the tender inside. “Look, for example, at the recent Richmond scandal involving the Prime Minister. It’s no different here in our very own village. The fat are only getting fatter.” “What if you refused to pay?” I asked. The shrieks of disapproval must have been audible all the way to the ferry. “Listen to me,” snapped Teofrida, “you don’t have the power to refuse them. What will happen when your child gets malaria and needs treatment? What will happen the next time you go to deliver? No, no. This you cannot refuse.” “Asante?” they scoffed, “Asante kwa nini?”

Asante, Swahili for “thank you,” was a term used in reference to a monetary tip that women gave providers in facilities after they delivered. Unlike most gestures of thanks, however, this one wasn’t always voluntary; many providers in public dispensaries demanded
money for “helping” with a service that was free according to RCH policy. *Asante* was not
limited to maternal services but was most typically associated with these, especially delivery
care. Although I never witnessed a provider outwardly ask a woman for payment (possibly
due to my status of outsider or *mzungu*), I listened to remarks like Rosi, Mariam, and
Teofrida’s on a regular basis. On many occasions also I observed women and family
members offering folded Tsh notes to providers following a delivery. Most women agreed
that an acceptable tip ranged from 3,000 to 5,000 Tsh, but it could be more or less depending
on a woman’s material situation. The common perception was that the more money a woman
was assumed to be able to pay, the better her care was. For example, a woman who managed
to give 5,000 Tsh at her last delivery was treated well – she was not left alone to deliver, she
got whatever medicine was available, and she was not publicly shamed. The same was true
for women whose husbands were employed, or for those known to have brought in a surplus
crop that year. Conversely, such amenities were not guaranteed for women presumed unable
to pay the acceptable amount. Both wealthy and poor women felt they were sized up in
facilities as deserving or undeserving of quality service (whatever that meant in the
circumstances) based on their ability to pay *asante*. This is why, in an expression of sarcasm,
Rosie and her friends were asking *asante kwa nini?* Thanks for what?

The practice of *asante* was ambiguous in nature, partly due to confusion in official
payment structures at different facility types. All maternal services were officially free at
public facilities, while mission facilities charged a flat fee for delivery (usually 3,000 Tsh).
St. Francis, the district hospital of Kilombero, was a parastatal entity and thus both private
and public – basic vaginal deliveries there cost 10,000 Tsh and cesarean sections up to
40,000. This facility was also only one of two places a woman could get surgical services,
the other being the fully public but utterly remote district hospital of Ulanga. Given this setup, it makes sense that the collection of *asante* was more typical of government than mission facilities. However, as with *vifaa*, providers in some mission dispensaries were picking up on it. At the same time, not all providers at public facilities engaged in this practice to the same extent and in the same ways. For example, one dispensary did not require *asante* at all, nor did it punish women who couldn’t afford it (although most women still paid it just to be safe). Two others, just ten kilometers apart, made the practice quasi-official and charged everyone 3,000 Tsh up front – explaining that this was fair, indeed a bargain, relative to St. Francis. Finally, four dispensaries expected money even from mamas who delivered at home, charging them 5,000 Tsh to “register the baby” when they came for vaccines but “waiving” this fee for women giving birth in that facility.

As with *vifaa*, the practice of *asante* has a wider context. However, pinning down when this practice was established and how it was produced proved much more difficult. From discussions with Tanzanians at every rung of the social hierarchy, a few general observations can be made. First, overall lack of opportunity in Tanzania has meant a scramble for formal employment among the well-off and for informal or tertiary work among the poor (compounded by exclusion from land and agricultural inputs). The principle objective of those in salaried posts like health care and education is to make money. For many people in these positions – often better educated, more urban, and not necessarily excited to work in rural villages – the commitment seemed to stop there. Take this attitude in addition to a work environment with little supervision or mechanisms for accountability and it is no surprise that health facilities became essentially private enterprises for the gain of providers working there. On top of it all were the examples of corruption and patronage set
by officials at higher levels of government, such as the Richmond scandal that Rosi and her friends brought up.

When discussing the problem of *asante* with an RCH coordinator, this official expressed dismay: “First, how do we prove these things without putting the village women at risk? Then there is all the bureaucracy involved with firing people. And finally, with whom do we replace them? The best we can do is transfer them to a facility in another village.” True to these words, the transfer of clinical officers and nurses was the only consequence I could detect for behavior deemed inappropriate, and it was not always a negative one. Last, it is important to note that, in the villages where I worked, facility providers were not underpaid – overworked, yes, but their regular salaries were more than enough to cover living expenses in the valley. Most clinical officers had invested in large plots of land and were turning out big harvests in addition to their wages. Again, such personalized activity was consistent with national goals for economic development and self-reliance.

**Birth in the time of growing**

Zamda found herself pregnant again in the rainy season. Nearing delivery, even, for what would be her tenth child. Although one of her previous babies was born dead and she’d lost two others to fever or *degedege*, so far she was not as pleased about this pregnancy, not as secretly proud as she had been in the past. At age 42, Zamda was getting tired of becoming pregnant and having to fret about how she would survive it. Tired of working on other people’s *shamba* to get the money to go to a health facility. Tired of struggling to take care of children and then losing them. Since her first pregnancy at 16 years old, she had given birth in dispensaries, health centers, hospitals, and homes. At this point she felt it didn’t matter much where she went – her chances of living and dying were probably the same. Just so long
as her condition didn’t put the family in such a state of debt. They had still not recovered from her last delivery enough to be able afford clothing or school notebooks, let alone have their plot of land plowed properly.

Zamda’s last delivery was also during the time of growing. The rice paddies around her village were thriving that year – they were so green it hurt her eyes to look at them from a distance. But the corn crop had been damaged from too much water. She remembered the arduous journey to the dispensary well. Her husband’s second wife, Khadija, remained home with the children while she, her mother-in-law, and her husband, Juma, crossed a river in a rented dugout canoe and then waded through mud up to their thighs for two hours. Even though her pains were mild and irregular, Zamda was worried she might deliver quickly when they got stronger and was told she could have a problem with bleeding after the baby came. At the dispensary she was found to be six centimeters dilated. But two hours later, nothing had changed. The clinical officer and nurse-midwife on duty decided they couldn’t help and that she would have to go to the district hospital in Ifakara. She was told this is what happens when women have too many babies and that if she was going to continue conceiving, she should be prepared to deliver in a hospital. Unfortunately, any buses or lorries that might have passed by that day were stopped where the road had washed out. The family had no choice but to use the ambulance from the health center a few villages over. After getting stuck twice, they finally made it to St. Francis, where Zamda soon delivered safely and without intervention. But by that time, her family had incurred 55,000 Tsh of debt; 30,000 for the ambulance (a “petrol fee”), 15,000 for hospital charges, and another 10,000 for food and lodging in Ifakara and transport back to their village.
This was why, in the seventh month of her tenth pregnancy, Zamda moved to *shamba* to help her husband work – so that they might produce a surplus they could sell. She knew she would probably go into labor there, but she couldn’t risk a poor harvest this year. No, she’d just take the chance of delivering at *shamba*, in the skeletal structure of thatch and bamboo where the family ate and slept on a temporary basis. She could always send Siri, her oldest daughter, to call for Tekla or Lucrecia if necessary. For the promise of a bag of rice and maybe a chicken, at least one of these *wakunga wa jadi* would agree to travel the two hours from their village and assist her to deliver. This way, God willing, they could pay back what they still owed Ahmed, the shopkeeper who lent them the money to get care at St. Francis. She wouldn’t have to send her three next oldest children to farm his land anymore.

Zamda’s story shows how economic and opportunity costs of obtaining obstetric care in facilities can lead to debt and deeper poverty, generating states of material as well as social exclusion. Similar processes are reported in other studies; Pitchforth, *et al.* and Afsana describe how health systems and social structures in Bangladesh create massive financial burdens for women seeking obstetric care. (96, 128). Of note is that Zamda’s family was average with respect to material wealth until the birth of her ninth child. But this baby came at the wrong time of year. The rainy season, or time of growing (*kipindi cha kilimo*), is when most people have used up their resources. They have consumed the rice and corn from last year’s harvest, sold whatever surplus they produced, and spent the money they made. So not only is it a time when mobility becomes painstaking and precarious, it is also when food is scarce and cash is hard to come by. Some people make ends meet by growing garden vegetables, brewing beer, repairing bicycles, or engaging in other informal work. But for most, any activity away from *shamba* is time away from the main means of income. Unless
you are among the few with formal employment (health care, education, public administration, DSS work, or farm industries), you are likely to suffer some in the time of growing. The only way Zamda’s husband could pay for her care during this season was to acquire a loan that would disrupt whatever stability the family had achieved.

In looking more closely at this ninth delivery, we can gain insight into the decision Zamda made for her tenth. Considering the outcome – that she safely gave birth without intervention at St. Francis – did the dispensaries staff act prudently to send her to Ifakara after only two hours? Possibly. They may have diagnosed her as “failure to progress,” deciding she was in need of labor augmentation or cesarean section. Also, Zamda was a woman of high parity and thus at greater risk for postpartum hemorrhage. If the providers felt unprepared to deal with this complication, they might have felt they were acting in her best interest. Whether for lack of training and supplies or for other reasons, some dispensaries had a low threshold for referring women to St. Francis. Add to her physiologic traits the fact that Zamda was an older mama with no education and many children, and this threshold might have been even lower. Although her elderly mother-in-law carried vifaa to the facility on her head and Juma managed a small asante, she still represented a common village woman who refused to control her fertility. While being childless was a pitiable state, many well-off people looked down on women of extremely high parity, as such condition signified backwardness or anti-development. This devaluing is evident in the providers’ rationale for sending her to Ifakara and in blaming her for her own condition and its consequences, even though in reality women had little decision-making power about becoming pregnant. So perhaps the decision to refer Zamda was justified by physiological and resource-related factors, but it was also colored by social positioning on a field of uneven power relations.
With her subsequent pregnancy, Zamda decided to stay away from the dispensary and deliver at home, even at *shamba*. There was no way the family could afford for her to go to St. Francis again, and besides, now she was poorer with yet another pregnancy and even more susceptible to humiliation. Equally important, she could help her husband up until she delivered and then return to work sooner than if she went to Ifakara. While many women had a period of rest after giving birth, there were no strict rules that applied and certainly not any that were conformed to at this time of year. Moreover, she could solicit a traditional midwife to attend her. These *wakunga wa jadi* (or TBAs) typically assisted women in their homes and, while they appreciated a pair of gloves and bit of soap, did not require *vifaa*. Their reimbursement was also negotiable – usually 3,000 Tsh or payment in kind when a family could muster the resources. Some received training in a UNICEF workshop that took place in the valley 12 years ago, but most relied only on their experience. In the end, Zamda’s choice was logical. After two months in the field with swollen legs and aching back, she delivered alone at *shamba*. Tekla came in time to help with the placenta, the bleeding was heavy but not too heavy, and the girl was small but healthy. Of course it was dangerous; Zamda was aware of this. However, what is critical to realize is that, for her, risking more poverty and exclusion was an even higher stakes gamble. Trading one chance for another, she made the most pragmatic decision she could.

*Wanawake wa kisasa, mwenzangu na mimi,* and women in-between

The day was still fresh when we got to the dispensary. Two health aides were taking *chai* on the back steps and the scent of fried *mandazi* hung in the air around the providers’ housing. Semeni was the nurse-midwife on duty, a young and affable woman with whom I had worked before. She was washing up after manually removing the placenta of someone
who had delivered at home during the night. Another woman was in the labor room, shifting back and forth and singing in a low, deep voice. Semeni hurriedly dried her hands and rushed to attend this woman. “Mama Esta, habari yako?” How are you doing? “Mmmm… I think it is close now,” came the older woman’s reply. Mama Esta was tall and stately, swathed in beautiful blue *vitenge* printed with yellow butterflies. Her ethnicity was Chagga and she had migrated from northern Tanzania to the Kilombero Valley three years ago when her husband was transferred there to be a primary school teacher. Mama Esta planned to stay at a maternity waiting home called *Tumaini* near St. Francis until she delivered. But labor had started that morning, the very day she’d arranged to take the train to Ifakara. So here she was at the village dispensary.

Soft cries suddenly rang out from the recovery room. Mama Esta and I looked at Semeni. “Oh, that girl,” she said, shaking her head in exasperation, “nothing is wrong there. She is just feeling the after pains.” Once it became obvious that Semeni had no intention of leaving Mama Esta, I went to check just in case. Tausi was lying on the floor in the middle of the room trying to make sense of what happened. Apparently she’d fallen, or more likely passed out, after getting up to go to the latrine. Her hair was short and she wore a thin black *kanga* tied at the chest with a few red-and-white beaded necklaces. Her feet and hands were callused and her arms muscular. After ruling out uterine atony and excessive bleeding, I assisted her to the latrine and then back to the bed. Tausi explained that, after delivering with an *mkungwa wa jadi* at her parents’ house around midnight, the placenta failed to come out so she left the newborn with her aunt and walked to the dispensary at first light. Being unmarried, she was accompanied by her brother, but he had long since left and now she was by herself. She told me she was about 18 years old and this was her second birth. She also
said she was hungry. “Why did you wait until morning to come?” I asked. “I didn’t want to wake anyone up,” was her matter-of-fact answer. “Can you imagine? A daktari or nursi disturbed in the middle of the night by someone like me? Hospitali si kwa mwenzangu na mimi.” The health facility is not for people like me.

An hour later, just after Semeni had escorted Mama Esta and her newborn to the recovery room, a commotion erupted in front of the dispensary. Semeni leaned back so she could view the scene from the open window. Then, in English, beseeched the air above her, “Why me? Why today?” In a clash and clamor of color and sound, four women were pushing and pulling a wheelbarrow up the path to the front veranda. In it, a fifth woman writhed with discomfort, clutching a plastic basin in one hand and a handbag in the other. She was wearing a tailored shirt with puffy sleeves and shoes with a three-inch heel. When they reached the door, she exclaimed, “Mama, nitakufa leo! Kwa kweli, nitakufa! Mama, I will die today, surely I will die. “Ah, Amida,” Semeni called out, “I wondered when you would be here.” The woman struggled to stand from her makeshift transport amidst a small crowd gathering to see the clinical officer. As she tottered toward the labor room between contractions, one of the aides derided, “Amida, you enjoyed yourself with a man and now you’re asking for our help? We were not there when you were enjoying yourself, it is not for us to stop your pain.” The other taunted, “Yes, and where is your mchumba now? Out drinking pombe at the canteen?” With an unreadable face, Amida smoothed back her braids and held her basin out. Semeni took it and sighed, “Dada, what is all of this?” She swept her arms wide to indicate the whole of the woman, “So you think you’re a modern lady? A mwanamke wa kisasa like Esta there?” Wincing, Amida merely laid down on the examination table.
That morning at the dispensary brought into sharp relief the multiple and contrasting positions and identities of women in the Kilombero Valley. In these brief interactions, it is possible to gain insight into practices of social exclusion as they relate to the production and reinforcement of shifting states of inequality. The performance of position and identity is evident in the women’s physical appearance alone – from Mama Esta’s rich folds of kitenge to Tausi’s thin layer of kanga to Amida’s handbag and heels that necessitated a wheelbarrow. There was also Semeni’s white nurse uniform and the orange frocks of the health aides. To the extent they could, women made a special effort to dress up when going to a health facility, often presenting in their best attire with hair freshly braided and faces scrubbed. For one thing, it could give the impression that a woman was materially well-off (perhaps able to afford a nice asante), and thus deserving of quality care and respectful treatment. For another, it conveyed a sense of being “clean” and “modern” as opposed to “dirty” and “backwards.” Although not enough to ensure good services, simply being at facility for delivery was a way of enacting an identity that embraced proper hygiene and modern health practices. Finally, dress could signal ethnicity for some groups, the role of which is touched on below. Unlike the vifaa, physical appearance was not construed to indicate work ethic or obedience to authority. However, it did speak to a woman’s place amidst other salient categories that could affect the experience and outcome of childbirth.

But there were more factors at work than what appearance could account for. While anonymity was possible in district hospitals, most people were known to each other and to providers at the level of health centers and dispensaries. Thus, what was reputed to be a woman’s standing along lines of family, occupation, ethnicity, education, and sexuality made for a social appearance that could also influence the degree to which she might be included or
excluded. For example, Amida may have tried to use an elaborate presentation to mitigate her reputation of having a drunk, irresponsible fiancé whose laziness made it necessary to resort to sex work. However, while this tactic perhaps bought some physical security in terms of receiving adequate care, she did not escape the social and emotional degradation that the encounter produced. Material wealth and access to it was a key marker of social status among villagers, often cutting across and affecting one’s place in other categories. Amida occasionally farmed on her father’s land but did not have use rights to land of her own or to a husband’s. Thus, she found ways to appropriate resources in the informal market – a strategy that wasn’t uncommon even for married women. But despite the fact she managed to make a living for herself (in a variety of ways including sex work), qualities of her fiancée reflected poorly on her. A woman of worth was well cared for by a responsible man, while a woman of lesser quality was not. While being unmarried was not enviable, many women headed their own household. Problems with this state concerned access to resources more than social disgrace. However, having a partner who was lazy, irresponsible, or frequently drunk was another matter – one that created difficulties for Amida at the dispensary.

Besides material wealth, parity, and partners’ reputation, other sociodemographic characteristics still interacted with women’s status. These will not be described in great detail but rather noted briefly to give a sense of the complexity involved in the making of social identities. Ethnicity, while not a major source of conflict or discrimination, could still foster exclusion and inclusion. For example, Amida was a member of the Pogoro tribe, one of the largest indigenous groups in the valley. Persons of alternate ethnicities (including providers) routinely informed me that Pogoro people are “lazy,” “don’t like to work” and “can’t be trusted.” Tausi was from a semi-nomadic Sukuma group that, while said to be fierce, existed
at the farthest margins of society. In contrast, people from the outside group to which Esta belonged, Chagga, were often touted as being hard working and well-educated. As compared to ethnicity, the role of education was more ambiguous. I heard again and again that “a woman can be educated but if she doesn’t produce a big harvest, what good will it do her?” On the other hand, it did facilitate formal employment and was associated with development and modernity. The crucial point is that when a woman seeks care at childbirth, she brings a constellation of meaningful social indicators with her – some she can affect, but most she can’t. Facilities, especially at the village level, are public spaces and what occurs there becomes a matter of public knowledge (even if a woman stays at home). For women whose indicators add up to an identity that is not valued, the act of opening themselves also opens them up to a state of further social discrediting, emotional abasement, and physical disadvantage.

Processes of exclusion and inclusion seemed to take place within women as well as without. A case in point is what Tausi said after I assisted her back to bed – that to wake a provider at night was unthinkable for someone like her and that delivering in a health facility was not for the type of person this was. The term she used, mwenzangu na mimi, translates to “people like me.” In using this term, Tausi was not referring specifically to ethnic group. Women of all different ethnicities, ages, parities, and family/marital situations would often make statements to the effect of, “Modern medicine (madawa hospitali) is not for people like me. We are not used to (kuzoea) such things.” However, what these women did share was a state of relative deprivation and marginalization. In comparison, prosperous and well-educated women like Esta were called wanawake wa kisasa – modern, contemporary women of today who acted in accordance with ideals of development, progress, and self-reliance.
Unless such a woman could not reach a health facility due to issues of distance and timing, she would almost surely go there to deliver and, generally speaking, the bigger the facility the better.

Revisiting the conceptualization of personal struggles for *maendeleo* (development, often in a national sense) helps explain why the identity opposite *wanawake wa kisasa* was not the concept of traditional (*-a jadi*) but instead *mwenzangu na mimi*. Because development through economic growth was a particular way that modernity (desirable, rational, and moral) was collectively envisioned (48), poverty became something opposite modernity and being poor (*maskini, fukara*) became analogous to being traditional – but in a derogatory sense that denoted backwardness. Poverty also approximated a state of amorality, which was why women were deeply ashamed at the thought of going to a facility in a tattered old *kanga* or without *vifaa*. This was also a reason why most women did not tell me directly that they were poor but rather described themselves as *mwenzangu na mimi*. More sweeping terms that women used to refer to categories of advantaged and disadvantaged included *wanaweza* (“those who are able”) and *hawawezi* (“those who are unable”). Essentially, unable women tended to self-exclude or censor from biomedical obstetric care while able women promoted themselves and their entitlement to it.

But what about the women who fell somewhere in-between? Women not as well-off as Esta but better-off than Tausi – women like Asha, Mwanmisa, Sakina, Rosi, Mariam, Teofrida, Zamda, and Amida? This is where Holland, *et al.’s* theory of identity is especially helpful (51). From this perspective, women held particular self-understandings in relation to the figured world of childbirth (their position and entitlements relative to providers, other childbearing women, and type of care they might receive) as well as their relative standing
outside of it. Agency within this world depended on such understandings; decisions, actions, and even desires were circumscribed by the identities through which women saw themselves and others. To some extent, this explains the performances of *mwenzengu na mimi*, *wanawake wa kisasa*, and women who were neither here nor there. At either pole, Tausi and Mama Esta accepted their respective identities. But by going to the facility while preparing to deliver alone, Asha seemed to be negotiating her position, attempting to belong but hedging her bets. Sakina appeared fairly certain she couldn’t pull off *wanawake wa kisasa*, but was still willing to try in order to get the care she was told she needed. Meanwhile, Zamda resigned herself to a lower status, perhaps not quite *mwenzangu na mimi* but closer to it than she had previously been. Finally, whether for the sake of receiving skilled care or because she truly viewed herself a modern lady, Amida resisted the staff’s attempts to position her as inferior and intentionally laid claim to an identity of higher value. In some cases an identity emphasizing the modern could overcome self-understandings regarding social position, wealth, and shame. Usually, however, relational aspects (which included characteristics of self and modernity) seemed stronger than beliefs about personal *maendeleo* alone.

Within this figured world, therefore, women crafted a range of responses that reflected the high stakes of the outcome as well as their individual identities – acceptance, resignation, negotiation, or resistance. When a woman’s self-understanding collided with how she was understood by other actors, a space of contestation opened where new identities could form or old ones could be reproduced. However, because at least one other actor was a provider with more legitimate knowledge/authority, the usual outcome was a downgrading of status or the maintenance and reinforcement of status quo positions. People of all standings and types described providers in facilities as exhibiting *dharau* for women determined to be
The Swahili root *dharau* can be a noun or verb, but essentially means to devalue, despise, or show contempt for. *Dharau* in facilities was manifested in providers’ practices of mocking, scorning, berating, neglecting, and sometimes slapping. It could also be seen in inappropriate uses of biomedicine. On one occasion of volunteering in a hospital, I noticed a naked woman on a gurney struggling with hands tied above her head. After I inquired as to what was happening, a nurse explained that the woman was going for cesarean section because she was being uncooperative. Regardless of how *dharau* was enacted, biomedical providers had the power to perform it. Women could attempt to affect their perceptions, but ultimately these providers decided what kind of care a woman was worthy of in the public arena – whether she was clean, modern, obedient, well-kept, and wealthy versus dirty, backwards, disobedient, disregarded, or poor. Like these categories, providers’ behaviors were not dichotomous; gradations of care existed to accommodate and reproduce the spectrum of identities in this figured world. So while identities could shift and change, unless a woman’s life situation improved dramatically outside of this world, her personal and public self-understandings were usually adjusted in a direction that made things worse.

The stories, *vignettes*, and pieces of conversation presented here demonstrate how local, micro level processes produce states of social exclusion at childbirth. They also illustrate some of the ways these processes are tied to and located within wider, macro level systems of unequal power relations. The women described above are epitomical in their experiences; many more women, both in the Kilombero Valley and beyond, will confront the childbirth dilemma again and again over the course of their lives. As Farmer says of the life histories he uses to explain the suffering of people in Haiti, these stories are “anything but anecdotal” ((40) p. 282). Although occurring in a particular place at a particular time to
varying degrees and through specific and overlapping institutions, the processes depicted are
durable. The systematic exclusion of some women (via shaming and devaluing) alongside the
inclusion of others (via respect and recognition) produced overarching categories of “able”
and “unable” that resulted in differential use of services and differential treatment. For those
in positions of power or privilege, such distinction was justified by nationalist ideals
embedded in development and reform policies – self-reliance, individual responsibility, and
economic growth. Bourdieu and Wacquant term this kind of reasoning as “misrecognition,”
or the mistaking of something dangerous for something good (129). From the perspective of
disadvantaged women and families, however, the situation was intolerable and deteriorating.
Some expressed this sentiment with outbursts of anger and despair while others simply held
up their hands. None felt capable to change it.

*From social exclusion to embodied inequality*

The theoretical leap from the above processes of social exclusion to their expression
in uneven physiological outcomes is not far to make. However, the specific pathways
through which bodily incorporation takes place are worth closer consideration. To review,
evidence shows that within developing countries there are enormous poor-rich disparities
among women using biomedical obstetric care (54, 55). Statistics on whether stratifications
exist in maternal mortality ratios are harder to come by, but as Kunst and Houweling state,
“there is little doubt the burden of maternal mortality and morbidity falls disproportionately
on poor and less educated women” ((55) p. 294). In their report on the global picture of poor-
rich differences in use of biomedical obstetric care, these authors explain that under-use of
this service is a primary factor contributing to maternal deaths among the socially and
materially disadvantaged (55). Thus, while it might be hypothesized that higher levels of
poor outcomes in these populations occur through channels of chronic stress, persistent infection, or micronutrient deficiencies, this is not what I will try to show here. Instead, I will reveal how states of relative exclusion and inclusion make their way into women’s bodies through the kind of care they can access – their choices for childbirth care and the quality of treatment they receive once at a health facility. Going back to the Ministry of Health and Social Welfare’s maternal bill of rights, I will examine embodied inequality through assertions, relinquishments, and negotiations of the right to liberty and non-discrimination in the struggle for social security, maternity protection, and survival.

**Differential access in seeking biomedical obstetric care**

Before getting to women’s decision-making processes around using biomedical obstetric care, a few notes should be made concerning the matter of choice and the definition of “biomedical obstetric care.” In her monograph on childbirth in south India, Van Hollen makes the point that “choice” is never simply a matter of free will for rational, value-maximizing individuals; rather, it is always surrounded by political-economic contexts and shaped by sociocultural values such as gender and class. Nevertheless, she also points out (following Garro) that an awareness of this contextualized nature “does not negate the relevance of applying a decision-making perspective” ([94] p. 7). In my study setting, women’s desires, decisions, and behaviors in relation to obstetric care were structured by immediate physical circumstances converging with states of inequality as described above. However, within external and internal constraints, possibilities still existed that made varying degrees of agency practicable. It is important to recognize that these conditions do not always present barriers to a particular action, but can also be motivators. In the Kilombero Valley, some women were compelled to seek care in facilities due to decisions of family members.
Others felt they had to go due to the overriding fact of physical danger. At this juncture, I will therefore explore how different women worked within bounds of agency that restricted their options both towards and away from biomedical obstetric care.

The section of this paper dealing with the research setting gives a brief depiction of the array of facilities and providers that make up biomedical obstetric care in the Kilombero Valley. A more complete description can be found in a paper devoted to issues of assessing this care (130). What is worth reiterating here is that obstetric care is not a static, monolithic entity transplanted from the North to villages in south-central Tanzania. Rather, it is a fluid entity that emerges locally – not only in shaping perceptions and experiences of childbirth but also in being transformed by these itself, taking on unique contours that reflect available resources and actors’ understandings. In the villages where I worked, some TBAs collaborated closely with dispensaries in reporting home births, referring women with possible complications, and even conducting deliveries there. The clinical officer at one dispensary regularly called on Dorotea, a popular TBA who lived nearby, to lend a hand when staff was short. At the same time, a small but growing number of nurse-midwives were forming home birth businesses – another strategy improvised to meet local needs (and, despite public authorities’ official frown on domiciliary delivery, participate in modernity via private enterprise). Even though madawa hospitali typically referred to the type of medicine practiced in health facilities, it adapted forms that crossed over with both indigenous systems and visions of the modern in a context of limited resources.

Despite the many intricate (and indeed important) social and material forces at work, the role of immediate and particular physical circumstances in decisions around childbirth care should not be downplayed. Labor can be unpredictable, with haphazard timing and
erroneous fits and starts. The uncertain nature of this event, in conjunction with distance to and distribution of facilities, left some women who might otherwise use obstetric care plainly unable to reach it. Although the issue of distance and timing could affect anyone, it figured especially prominently in the choices of those who were relatively well-off. Most of these women who delivered at home simply could not get to a facility in time; some had a TBA assist them while others were attended by a relative or neighbor. The significance of this matter hit home for me in the course of trying to talk with Nelusigwe. After getting stuck in the Land Cruiser, slogging through mud, canoeing across floodplain, and desperately hoping to avoid crocodiles, we arrived at her home frazzled and wet. Settling on a mat she laid out for our interview, the words exited my mouth automatically, “Tell me, Nelusigwe, what happened with your last birth? Why did you deliver at home?” The woman looked at me as if I were mad – a look that guaranteed I did not make this mistake again. But in focusing my efforts on women closer to facilities, I discovered there were plenty living within 30 minutes of dispensaries or health centers who still did not use them. The following is a summary of factors beyond distance that affected these women’s choices.

First are the physical risks of childbirth. Regardless of social standing, every woman I talked to about kujifungua emphatically used the words hatari sana, or very dangerous. This unanimous belief in the inherent danger of childbirth demonstrated a general risk perception counter to the ambivalence found in countries with low maternal mortality ratios and over-medicalization of birth. It is one thing to extol the normalcy of this process and eschew technological intervention from the comfort of an industrialized nation, but quite another to claim this view in places with inadequate safety nets (a conflict I struggled with as a nurse-midwife from the U.S.; compare to Boddy’s ethnography of birth in north Sudan (82) and
Whittaker’s notes on anthropologists’ tendency to romanticize “authentic” birthing practices (95)). In addition, most women expressed confidence in the ability of local facilities to handle complications and felt it was safer to deliver there than home (although well-off women preferred hospitals). But while they largely agreed that facilities could help them if they needed it, women differed vastly on the question of whether they would. Not surprisingly, the uncertainty lay with those who might be characterized as hawawezi or who self-identified as mwenzangu na mimi. Of these, some opted to go in the hope of receiving life-saving care if necessary, while others concluded their treatment wouldn’t be worth it. Confidence in TBAs did not necessarily vary along these lines; most women appreciated the role and the kindness of these providers but expressed distrust in their ability to manage complications.

Perceived etiologies for childbirth complications appeared to be a conglomeration of witchcraft, naturalistic folk medicine, and biomedicine. Similar to Hausmann-Muela, et al.’s findings on fever, convulsions, and malaria in the valley, illness conditions related to birth were categorized as “normal” or “of God” (ugonjwa wa kawaida/Mungu) and “not normal” (ugonjwa si kawaida) or of witchcraft (uchawi) (131). This distinction, however, could not be made with surety until after a situation had resolved. Prior to this time, both illness types were possible. Therefore, labor lasting too long could be ascribed to a jealous neighbor who cast a curse to “close the way,” an improperly positioned fetus, or both. A woman with excessive bleeding might also be cursed, and/or her uterus might be too tired to contract, and/or she could have mapinga, a condition that results from sex with someone other than the baby’s father. Just as illness etiologies were not mutually exclusive, blending therapeutic modalities was also acceptable; people simultaneously pursued whatever treatments they
could, including herbal medicine, trips to health facilities, and anti-witchcraft remedies of *waganga wa jadi* (traditional healers). Due to this ambiguity, beliefs in indigenous etiologies did not pose a major barrier to seeking care in facilities. A woman with a problem could go to the dispensary while her family members consulted an *mganga wa jadi*. If cursed with obstructed labor, hemorrhage, or fever, she could be treated with cesarean section, oxytocin, or antibiotics. So while the different systems of medicine competed with each other to some extent, they were sufficiently integrated to also be cooperative. In the case of childbirth, the fact of medical pluralism did not typically prohibit or delay use of biomedical care.

Besides threats to physical security, however, potential economic, social, and emotional costs did circumscribe women’s choices in this regard. The influence of the economic burden is obvious. High official fees led to under-use of mission and quasi-private facilities, including St. Francis, the district hospital of Kilombero and primary site for services such as labor augmentation and cesarean section. Because of the financial costs, poor women were so afraid they might be sent to this hospital that they stayed at home instead of going to their village facility – including some with referrals to deliver at dispensaries or health centers for first births, high parity, or conditions that might increase their risk for a complication. Unofficial expenses involved with delivering at smaller facilities contributed at least as much to this burden. *Vifaa* and *asante* were difficult for many families of average material status to afford but out of reach for women deprived in this respect. Finally, a range of transportation and opportunity costs could also apply when seeking care at health facilities. Studies conducted in other parts of rural Tanzania (as well as other poor regions of the world) also document the hurdle that fears of unofficial or “hidden” fees present to use of this care (128, 132-134). As seen in the large debt that Zamda’s family
incurred from her delivery and how this transformed them from *wanaweza* to *hawawezi* in a move that was literally dis-abling, these fears are entirely legitimate.

The examples in the preceding section illustrate an aspect of the social and emotional costs women may have to face if they decide to use biomedical obstetric care. The production of social exclusion through various mechanisms of *dharau* (devaluing, shaming, humiliation) was enough to keep some women away from health facilities alone. Other researchers in other settings have also witnessed power differentials in obstetric care that allow for demeaning or abusive treatment of laboring women (84, 87, 88, 92, 94, 95, 135). In their study on health systems biased against maternal survival in south India, George, *et al.* describe women with obstetric emergencies as “desperate supplicants” who lack the power to demand accountability from facility providers ((135) p. 27). In the Kilombero Valley, no woman from and *of* the village was fully insulated from risk of degradation. However, not all women were equally desperate either, fearing discrimination or responding to it in the same ways. Women with particular articles, appearances, parities, ethnicities, marital situations, and reputations stood different chances of being excluded, depending on how their overall presentation was assessed. But the crosscutting factor was material wealth; risk of *dharau* was directly proportional to level of poverty. This discrimination is not unique to the villages where I worked. It could be argued that similar processes take place everyday at delivery units in the U.S. (see Lazarus’s description of asymmetrical access to knowledge/power in pregnancy and childbirth among American women of differing classes and ethnicities (136)). However, the stakes in south-central Tanzania are much, much higher.

As important as it is to understand why women do not go to health facilities, it is equally crucial to consider why they do. One afternoon we were chatting with Latifa, a spry
47 year-old who had recently delivered her 12th child at home. “Imagine! A woman has to struggle to get vifaa, beg her husband to pay asante, travel some distance, only to be made to feel like she is nothing and then receive bad care. You are the educated one here. So you tell me, why do we go? For the building?” Latifa’s turning the question on its head helped me to realize that motivators to action are just as critical as detractors and that neglecting them would mean missing half the picture. As discussed above, risk perception was a major motivator for seeking biomedical care. Related to this, so was antenatal referral for facility delivery by an authoritative/knowledgeable provider. Another catalyst involved identity. Although the chances of advancing social position through facility use alone were slim, this behavior still offered women an opportunity to perform a modern identity, to act and appear as wanawake wa kisasa and thus a more valued member of society. For a high fee, a few women took advantage of having a nurse-midwife attend them at home, intimating that this private care was even more exclusive than that available in facilities. But despite crossovers with more traditional practices, women seeking any form of biomedical care were pursuing something they viewed as distinct from tradition and in alignment with maendeleo. This action put them on the side of development – even if they didn’t have the resources theoretically necessary (i.e. education and wealth) to back up the claim.

A factor that could be as much a facilitator as a hindrance was the role of family members in this decision. In a general sense, women did not have much household decision-making power unless they headed a household (even if they contributed most of the wealth). But many variations existed with respect to this matter; some women had husbands living in a larger town, some had partners who lived in the village but not with them, and some were second or third wives whose husbands were only part-time residents. Unattached women
often lived with their natal families and were relatively independent with respect to life choices. So many women did, in fact, have a degree of autonomy within the domestic sphere that enabled them limited power over their health and the health of their children. Decisions around delivery were mutually made among present family members, such as male authorities, mothers-in-law, mothers, aunts, and pregnant women. In this way, the arrangement was similar to what Janzen describes as the “therapy management group” (137). Instead of debating the effectiveness of different options, however, the group focused on social and economic implications for the family. It was possible for a woman to be forced to stay at home against her own judgment, just as a woman who preferred a TBA could be compelled to have a nurse-midwife attend her birth. But these scenarios were fairly uncommon; women usually had a say in where and with whom they delivered.

In the end, women balanced risks and benefits amidst immediate circumstances and unequal power relations to secure the best care they could. The goal was survival first (including family) and dignity second in an approach that Lock and Kaufert describe as “ambivalence coupled with pragmatism” ((74) p. 2). Social and material exclusion mattered in choices of childbirth care; it shaped how women perceived, desired, accessed and experienced the biomedical option. This decision was easy for wanaweza, who often didn’t recognize how difficult it was for their poorer neighbors (or didn’t admit this to me). Certain they would receive the highest standard of care available, these women felt they had some control over the outcome. But for those in a state of disadvantage, the dilemma of kujifungua made them vulnerable to all kinds of loss. The majority of these women wanted to deliver in facilities, but not at any cost. Not at the expense of economic, social, or emotional well-being – where further degrading could threaten their lives as surely as infection, hemorrhage, or
ruptured uterus could. On top of such potential costs, these women hoped they would get adequate care in facilities but realistically feared they wouldn’t. This lead to the perception and experience of lack of control – hence the outcry of Mwanmisa and many others representing *hawawezi*, “all we can do is pray to God!”

**Differential access in reaching and receiving biomedical obstetric care**

During my last days in Tanzania, while tying up loose ends and preparing to leave, I came across an op-ed in “The Woman” section of the national newspaper *The Citizen*. It was entitled, “Why Tedi did not have to die” and told the story of a poor woman arriving at a Dar es Salaam hospital in critical condition. According to the paper, the nurses on duty refused to treat this laboring woman because she failed to bring gloves, cotton wool, and IV equipment to the facility. Even after being finally taken to the labor ward, staff still hesitated to attend to her “for reasons best known to themselves.” Both woman and fetus died before getting proper care (138). Because this article provided no details of Tedi’s condition or any treatment she did receive, it is impossible to understand the full account. However, my research in the Kilombero Valley suggests that the potential for getting substandard care is a real danger for women who are socially and materially disadvantaged. Tedi’s story suggests a similar inequity exists among women in urban areas of Tanzania, while Pitchforth, *et al.* document it in a large city of Bangladesh (96). For women with whom I worked, the high possibility of neglectful treatment fed into their decision-making of whether to even attempt to access biomedical services. This reasoning is demonstrated by Latifa’s fundamental question – why bother going to facilities if you are likely to get care there that is no different (and perhaps worse) than what you can expect to get at home?
It is necessary to reiterate that there are larger forces at work than individual behaviors of health professionals. As discussed in relation to the study setting, public-sector reform in aid-dependent countries aim not only to deliver services but also to transfer neoliberal values (48). In Tanzania, it appears as though the latter objective is outpacing the former. The new ideal of the Tanzanian subject, citizen of a capitalist democracy who uses purchasing power to get ahead, is gaining ground in a context of dismal social services and health care. Those with more purchasing power are accruing what limited resources do exist (including education and employment opportunities) while those with less are left with little recourse – a dynamic that widens the poor-rich gap while offering moral grounds for it. Add to this rationale a health system replete with staff shortages, inadequate supplies, and no functioning mechanisms for accountability, and a perfect storm is created where providers feel they must and should set priorities that determine who deserves what care is available.

The training that health professionals receive certainly does not advocate discrimination. On the contrary, I was involved with a nursing upgrading program in Ifakara that based its midwifery curriculum on a holistic model of “caring” seemingly adopted from U.S. classrooms. Rather, valuations of who deserves services (and what kind) are learned on the job. Much more work is needed to understand the processes that generate and sustain this differential treatment, but what can be said was captured by two women of average standing called Agatha and Olivia, “it is impossible for wanaweza to receive the same care as hawawezi.”

The RCH coordinators of Kilombero and Ulanga Districts assured me that access to services was improving. For example, in the Kilombero government offices I was told that the proportion of deliveries in health facilities has increased over the past 20 years from 14%
to 59%, while use of antenatal care has gone from 25% to 99%. While these figures were probably close to accurate, they do not reflect the current reality, nor do they predict future trends. Most residents I spoke with, women and men of all ages and positions, felt that the situation with respect to accessing obstetric services was deteriorating. The roads were getting worse, the care was getting harder to pay for, and providers were becoming more powerful and less inclined to act responsibly. Even if a family could afford petrol for the ambulance, chances were high that the vehicle was either in disrepair or ferrying a public official to the market. But what is most misleading about these estimates is that they fail to distinguish for which women access is improving. Epidemiologists in global health criticize as inequitable the tendency to express progress towards health policy goals in societal averages instead of by social and economic characteristics (53, 139, 140). If women are entitled to liberty and non-discrimination in their pursuit of childbirth care, these statistics are incapable of indicating whether this right is being violated or upheld.

**Conclusion and Recommendations**

This paper provides a perspective on embodied inequality as produced through the workings of social exclusion at childbirth in south-central Tanzania. Exclusion and inclusion at this site occur through integrated processes that simultaneously take place on levels of transnational institutions, the national State, local communities, individual households, and personal selves. The very fact maternal mortality still exists as a significant “left-over ill” that has all but been eradicated in wealthier countries demonstrates the global nature of this inequity. Macro level processes that constitute this inequity involve the post-colonial, political-economic positioning of sub-Saharan Africa in the world. But the disparity doesn’t end here. Tied to this inferior global standing, State-level contributors to inequalities within
African nations include failed economic policies, inefficient public programs, and corrupt practices that restrict access to employment, agricultural inputs, social services, and health care – especially in rural areas. But as Gore argues, of central concern is the reciprocal relationship between social positioning and entitlement to scarce resources (41). It is this direct association that allows for, as historian John Iliffe shows, the African “poor” to be distinguished from the “very poor.” (141). It is also what enables 73% of Tanzanian women in the highest wealth quintile to deliver at a health facility, while only 25% of those in the lowest quintile use this care (126).

Ultimately, the micro level is where social positions are uniquely defined and where wider mechanisms of exclusion play out in everyday lives. It is within local communities that the process of opening oneself produces states of exclusion among women, just as these states determine the kind of care women can seek and receive. It is within village facilities that an intervention conceived in the upper ranks of global health consortia is warped into an improvised “policy” that facilitates discriminatory treatment while alleviating the problem of short supplies. And it is within the intimate sphere of identity that transnational neoliberal values and nationalist ideals of modernity and its antitheses become translated into varied means of asserting, relinquishing, permitting, denying, and negotiating entitlement to biomedical obstetric care. Ethnographic study of these situated processes provides insight into how embodied inequality happens. This methodology can trace some of the channels through which social and material positioning (differential and inequitable access to economic, political, and social power) become incorporated within bodies and then expressed as uneven behaviors and outcomes in populations. Nguyen and Peschard summarize the utility of this approach:
“Recasting the relationship between disease and inequality as the embodiment of social relations adds value to epidemiological findings by allowing affliction to be related to prevailing ideologies that inform policy, configurations of social violence, the way misfortune is conceptualized and managed, and how meaning systems influence how individuals interpret their bodily states, seek care, and fashion themselves according to prevailing moral notions” ((29) p. 459).

Making biomedical obstetric care more available to all women in poor and transitional countries is and should be an imperative. In her recent article outlining the challenges of global health, Laurie Garrett asserts that, instead of being derailed by “stovepiping” resources into vertical interventions that reflect the fickle and uncoordinated interests of donors, global health efforts should keep the big picture in view and prioritize sustainable health systems that are contextually appropriate. In particular, she argues that maternal mortality should be a central focus within this priority, as the level of this uneradicated ill can serve as a proxy for the general condition of both health systems and populations. She reiterates that no amount of funding will solve health problems in developing countries if monies are not spent effectively (142). However, I will add that not only do health care systems need to be functioning and sustainable, but in order to be effective they also must meet the needs of society’s most disadvantaged. Supporting population-based evidence for enormous disparities in use of obstetric services, my findings from Tanzania indicate that social and material inequalities among women are crucial determinants of access to care. As individual agents differentially positioned according to multiple markers of power and value, women approach obstetric care in different ways and for different reasons – most of which hinge on relative standing in family, community, nation, and world.

If strategies to implement the above goal assume its intended targets are a homogenous group with fixed desires and responses, resulting interventions may continue to
benefit some women while depriving others. As Abu-Lughod puts it, such “trafficking in
generalizations” leads to generic policies and programs that erroneously surmise what works
for one “third world woman” is sure to work for another (46). A health care system that
creates and reproduces inequalities that exclude some women from the very care it seeks to
offer cannot effectively alleviate overall pregnancy-related death and disability. Moreover,
Gwatkin demonstrates that such a system will likely contribute to inequitable outcomes
between poor women and groups who are better-off (53). As a system of knowledge,
biomedicine is also a socially constructed apparatus of culture and power (143). In the health
development encounter, this means that relations of power as well as health are always at
stake, and certain asymmetries of both can actually be strengthened through efforts to
promote well-being. As Pigg reminds, “faced with a moral discourse of ‘saving lives,’ we
have to be careful to distinguish between evaluation of the medical initiatives being
promoted and evaluation of the actual social and institutional means through which these
techniques are introduced” ((91) p. 49).

Besides inadequate supply of technology and provider training, the fundamental
problem is lack of accountability. If this issue is not addressed, no efforts to improve access
are likely to achieve success. In relation to childbirth, Van Lerberghe and De Brouwere assert
that it is not enough to increase the supply of equipped facilities and trained professionals; it
is also a matter of how professional staff perform and how members of civil society build up
sufficient pressure to claim their entitlements (144). In the context of political and economic
development, accountability is often talked about as consisting of two core elements –
answerability and enforceability (145). Intrinsically, however, it comes back to power
relations and differential access to resources (135). As Mackintosh describes:
“Health care systems that do not offer care – that take a narrow or an abusive view of their duties – thereby contribute profoundly to people’s experience of what it is to be poor. To face abuse or to have fear cumulated when at one’s most vulnerable – to be denied care – is an element of what poverty is as it is experienced... However, effective care in response to need and vulnerability strengthens people’s agency and self respect in addition to physical well-being” ((49) p. 184-5).

Therefore, one crucial strategy for truly improving availability of obstetric care is to find ways of delivering services equitably, upholding women’s rights to care instead of destabilizing them – in effect disembodying inequality. Recommendations for improving services and preventing further marginalization of disadvantaged women in the Kilombero Valley might include the following. Obstetric providers must be dissuaded from demanding illegal payments, owning businesses that entail conflicts of interest, and engaging in humiliating, abusive, or neglectful behavior. This might be accomplished by increasing provider supervision and regulation, holding community-level meetings with stakeholders, establishing facility health boards, or creating systems that effectively produce both positive and negative consequences. In addition, government should restore supply of basic *vifaa* to all pregnant women (ensuring fair distribution) and run public campaigns to educate women about their rights. Until an affordable and reliable transportation system is put into place, TBAs should be brought into the system as active contributors to women’s health rather than excluded from it as agents of anti-development. Economic programs to improve the material status of poor women should also be implemented. Regardless of what specific interventions are pursued, all efforts must incorporate community participation in order to develop and sustain links between villages and health facilities.

But the first step is better knowledge. The World Bank report *Reaching the Poor* concludes that what is most needed in reducing health disparities are improved approaches to services delivery (146). To generate these, we also need better research on who “the poor”
are, how this category is produced, and how it affects health outcomes. Echoing Krieger, much more work is needed to better understand discrimination as a deterrent of health; the multi-layered mechanisms through which inequalities are embodied are still obscure. With respect to the complex dilemma of accessing care at childbirth, studies of greater depth and breadth are needed to evaluate how social positioning and material status shape desires, expectations, and behaviors within the figured worlds in which these operate. Strategies based on inadequate knowledge of people’s lives tend to fail, and those that assume universal ideals are likely to reinforce the very global-local power relations that structure inequity. Instead, Parpart and Marchand call for an approach that “acknowledges differences, searches out previously silenced voices, and recognizes multiple interpretations and solutions to problems” ((147) p. 12). As Bhutta states in an editorial addressing inequities in maternal health outcomes, “we do not simply need more research; we also need the right kind of research” ((148) p. 585). Hopefully the work presented here takes a step in this direction.
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Chapter V. Conclusion

Taken together, the findings of these three papers demonstrate that neither biomedical obstetric care nor its would-be users are homogenous entities that uniformly perform childbirth. By describing the practice of obstetric care in the specific context of the study setting, the first paper reveals difficulties in using universal assessment schemes to determine the adequacy of this care. This paper reinforces the claim that biomedicine is not a monolith and questions an uncritical reliance on generic means of assessment for evaluating progress and making improvements in maternal-newborn health. Turning to potential users of this care in the Kilombero Valley, the second paper identifies important differences among those seeking and not seeking obstetric services, examining how these differences affect related decisions and behaviors. Converging statistical sociodemographic characteristics of the study population with individual perceptions and experiences of childbirth, this paper demonstrates that differentially positioned women seek and receive obstetric care in a variety of ways, to a range of extents, and for diverse reasons. Finally, the third paper takes a closer look at these dynamics: it explains what it means for a woman to be disadvantaged, describes how this state is produced through processes of social exclusion on both macro and micro-levels, and shows how relative positioning within gender (especially in terms of material wealth and differentially valued social identities) is physically embodied in choices and actions that occur around childbirth.

The understandings this project provides have meaningful implications for the study community. In the first paper I make suggestions for how to better assess obstetric care in
this context so it can be more realistically interpreted. In the following papers, I present specific recommendations to improve access to this care for women who are poor or otherwise disenfranchised. Throughout my time in the field, these women were constantly asking me to help them get better obstetric care. Solutions we came up with together were to make *vifaa* available to everyone, encourage facility staff to respect and treat all women equally, ensure that government workers abide by RCH rules regarding fees, provide TBAs with training, and offer more, higher quality services (including transportation) at the village level. Some women were adamant that I hold community meetings to discuss these issues among stakeholders, including RCH coordinators, village leaders, facility staff, and families. Feeling unable to enact change on their own, RCH leaders also suggested this kind of intervention, recommending that I call it a “workshop” to disseminate preliminary findings. While such organized action could perhaps build up pressure to increase accountability (if village women actually spoke out), these meetings were not pursued because I could not be responsible for their repercussions. Instead, the dissemination of study findings includes making published manuscripts available to IHI and local IRB institutions, RCH officials at the district level, RCH officials at higher levels, and NGO projects working on maternal health in Tanzania.

The significance of this project has implications for wider contexts as well. After all, the problem of wealth, education, and other disparities in use of obstetric care is found to exist in countries besides Tanzania and in regions other than sub-Saharan Africa. Implementation of the strategy to increase supply of obstetric services does not appear to be reaching certain groups of women in a variety of geographical settings (1, 2). Both quantitative and qualitative components of the study indicate that availability and distribution
of health facilities do matter, but these are not the only factors that need addressing – and not necessarily the most important. The mechanisms through which particular inequalities operate may vary from place to place, but it is likely that processes of social exclusion at the site of services delivery contribute to embodied inequality in places beyond the Kilombero Valley. With global health resources being invested in a push to achieve MDG-5, now is a critical time to realize that interventions focusing on supply, while undeniably important, are not sufficient to ensure access to and use of obstetric care. The manner in which services are delivered is equally important, as this quality-related issue is intrinsically tied to how women seek and receive care at childbirth.

Besides geographic location, the other wider context that I am thus referring to is that of global public health intervention – the figured world of research, policy, and programs pertaining to maternal-newborn health around the world. The implications this study has for research in this area are detailed in the preceding papers, but I will present a brief summary here. First, in any locality is it crucial to recognize what biomedical obstetric care actually consists of and how it is routinely performed. To what degree this care is understood in a given context affects how competently it will be assessed (measured, monitored, evaluated) and therefore improved upon in that place. Second, just as assumptions should not be made about obstetric services, we should not take for granted that all women in a given population will use them similarly. Social and material inequalities among women must be considered, including identification of what counts as well-off and poor-off and how these states contribute to women’s ability to access services. A more comprehensive understanding of how differential positioning influences behavior in specific contexts will go a good distance toward crafting policies and programs that work in particular places and for particular people.
Whether the goal is to better understand behavior around biomedical obstetric care or to produce knowledge on disparities related to another health service, use of interdisciplinary approaches and mixed-methodologies can forward this agenda. Combining theoretical perspectives and research methods from different paradigms can help sort out how categories of inequality operate in relation to health behavior. In this work, converging methods was used to triangulate complex behavior from different levels and vantage points, couched in a recognition that the interpretation comes from my own viewing position as affected by my own history, culture, and experiences. But it is possible to mix methods in other ways; for example, to design a closed-ended questionnaire, ascertain perceptions of people who appear as statistical outliers, direct sampling strategies, or perform a variety of other tasks. However implemented, mixed-method research can combine the advantages of multiple ideas and methodologies to achieve a degree of validity, versatility, and artfulness that is difficult to come by with any single method (3). This approach is especially useful in untangling the complicated processes of embodied inequality. In taking such a course, this project contributes a mixed-method study to bodies of literature that, while becoming more flexible, tend to keep to themselves in terms of theory and method. It also adds to African and development studies much needed knowledge on lives of women in rural Tanzania following structural adjustment and other reform policies.

With respect to policy, programs, and practice, it seems that those of us who work in these areas should aim to address embodied inequality first and foremost – to improve health outcomes and access to care among members of society who are disadvantaged. This goal is not simply a matter of helping poor countries, but also a matter of helping people within these countries (within all countries) who are especially vulnerable. Once research combined
across disciplines provides more information on how unequal social relations and resource distribution translate into inequitable patterns of disease, it is the obligation of public health practitioners, policy-makers, and program managers to develop and enact responsive interventions. There is not good reason that the excluded should have to wait for interventions aimed at a fictitious “average” population to trickle down into some form of care they can reach. The process of such filtering can support and even exacerbate health disparities on the ground, as seen in the uneven use of obstetric services within countries and, more specifically, in the transformation of FANC’s birth plan in the Kilombero Valley. But an explicit focus on women who are socially and materially deprived could result in real improvements. Not only does this strategy have implications for human rights and social justice, but it might also facilitate access to appropriate care among women with a high need for services – thereby effectively and efficiently achieving a more equal, more equitable reduction of maternal mortality ratios.

Because the details of pathways between inequalities and health outcomes are not the same in all places, the specific recommendations in my papers will not likely apply to contexts outside of the study setting. However, lack of accountability and discriminatory treatment seem to be pervasive in many settings, leading to problems that take diverse forms but have similar consequences. In thinking about this issue, it is crucial to consider all potential determinants, including macro, micro, and in-between factors. Looking at obstetric services in the Kilombero Valley, it may appear on the surface as though the accountability problem lies largely with health facilities and providers. However, behavior at this level can be traced to simultaneous influences that are both deeper and wider. Issues of accountability are intertwined with the global exclusion of Tanzania as part of sub-Saharan Africa, which
contributes to limited resources including medical supplies, provider training and supervision, general employment opportunities, and enforceability of regulations. At the same time, processes involving State corruption and national aspirations for development work to sanction certain behaviors at the local level, including the most intimate sphere of identity and self-understanding. Because it may be difficult for public health strategies to directly effect change at extreme ends of this spectrum, my recommendations focus on levels that are perhaps more mutable to these efforts. The suggestions I offer do not imply that facilities or providers are solely to blame, but rather center on health system factors because this is a point where intervention might be possible. Problems deriving from lack of accountability in other contexts must also be resolved at the level of health systems within communities.

Other policy and program issues this study brings up include the role of TBAs and community-based interventions in access to obstetric care. Efforts to train TBAs were largely suppressed in the late 1990’s after a number of studies found this strategy to be ineffective in reducing maternal mortality (4). Since this time, TBA training (along with antenatal risk identification) has been held up as an example of what not to do, a “lesson learned.” The reason given for these results was that trained TBAs could not be supported by an enabling environment and therefore could not be depended upon to improve maternal outcomes (5). However, as of yet there are no official recommendations to provide such an environment for local midwives or to include them in the formal health system. In my study setting (and I suspect in others), childbearing women will continue to use TBAs until a reliable and affordable transport system is implemented or until facility distribution is increased, in addition to the resolution of accountability and behavioral problems in existing facilities that
affecting quality of care for disadvantaged women. Thus, it may be too early to categorically dismiss support for TBAs in every context, a conclusion Sibley and Sipe reach in a more recent analysis of TBA training and pregnancy outcomes (6). Until issues of capacity and access within health systems are adequately addressed, other community interventions besides TBA training and home-based treatment must also be pursued, including health promotion with women’s groups, good nutrition and infectious disease prevention, and efforts to improve the economic position of poor women (7, 8). Community participation in all interventions seems essential to sustain links between communities and facilities; a project in northwest Tanzania integrating local participation into maternal health interventions provides an example of a successful approach (9).

But training TBAs and implementing other community-based interventions are largely necessary because the broader system is not functioning. In her recent article outlining the challenges of global health, Laurie Garrett describes how no amount of funding will solve health problems in developing countries if funds are not spent effectively. In particular, she points to how systematic inefficiencies ensure that monies allocated to health efforts never reach the clinics, hospitals, and people at the end of the line – including strings attached to bureaucratic financing, leakage from multiple corruption sources, and lack of coordination among donor activities. Garrett also describes the problem of “stovepiping” or investing resources into vertical solutions that reflect donors’ interests but are fairly disconnected from the bigger picture, allowing for a perpetuation of Frenk and colleagues’ “left over ills.” For example, women with HIV are given medications to hold this disease at bay and prevent it from infecting their babies while they still can’t obtain even the most basic reproductive or newborn services. Instead of being derailed by targeted issues currently in
vogue, Garrett argues that the overriding priority should be on sustainable, functioning health systems. She furthermore insists that maternal mortality should be a central focus within this priority, as the level of this ill can be a proxy for the general condition of both health systems and populations (10).

By and large, I agree with this goal. But I would add to Garrett’s argument that for a health care system to be sustainable, it must be contextually appropriate. In addition, if the system does not meet the needs of society’s most disadvantaged, it is not truly functioning. We do need a system of adequate, appropriate biomedical technology to reduce maternal mortality, improve women’s health, and perhaps raise the physical status of people besides childbearing women. But if this system creates and reinforces inequalities that exclude some women from the very care it seeks to offer, it cannot effectively alleviate pregnancy-related death and disability. Mackintosh asserts that social inequities “directly shape inequitable health care systems, and that the failure of legitimate claims to health care is a core element of poverty as it is experienced” ((11) p. 187). In order to work properly, health care systems need to uphold human rights instead of destabilizing them. One crucial strategy by which this fundamental objective can be achieved is to find ways of delivering services equitably, remembering that relations of power as well as health are always at stake. Again, as Stacey Leigh Pigg astutely comments, “faced with a moral discourse of ‘saving lives,’ we have to be very careful to distinguish between evaluation of the medical initiatives being promoted and evaluation of the actual social and institutional means through which these techniques are introduced” ((12) p. 49).
References


