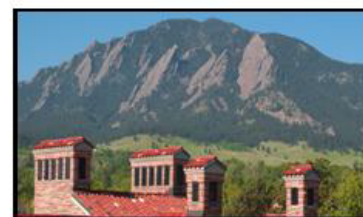


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***WORKING PAPER***

## **Understanding gender in Africa: Using qualitative methods to enhance DHS analyses of women's empowerment**

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## **Understanding gender in Africa: Using qualitative methods to enhance DHS analyses of women's empowerment**

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### **Abstract**

In response to global concern for the influence of gender inequality on the health and well-being of populations in developing countries, survey instruments including gender measures have become much more available over the past fifteen years. In particular, the addition of questions about women's empowerment to the MEASURE/Demographic and Health Surveys (DHS) in the late-1990s provides the opportunity to expand understandings of gender's influence on population, health and nutrition. The strong conceptualization for these questions, however, largely grew out of experience and knowledge of Asian cultures, suggesting that attention needs to be given to whether these measures are appropriate for sub-Saharan African contexts. The DHS offer a starting point for responding to global calls for understanding women's status, empowerment and their relationship to demographic processes; however, supplemental qualitative studies to validate and contextualize African DHS data would strengthen analyses. This paper provides examples of where and how qualitative data might be used to build a theoretical frame on which to base quantitative analyses of African DHS by providing (1) a more complex understanding of the gender context, (2) examining the validity of survey questions and use of survey measures in particular quantitative analyses, and (3) elucidating the processes and mechanisms behind gendered experiences.

### **Introduction**

Social scientists have greatly advanced the development, conceptualization and implementation of women's status survey instruments and analysis in the last 25 years. The addition, since 1999, of direct measures of women's empowerment to the MEASURE Demographic and Health Surveys (DHS) provides a major contribution to expanding understanding of gender's influence on demographic processes ([www.measuredhs.com](http://www.measuredhs.com)). Importantly, the direct measures attempt to address the multidimensionality of these concepts (Kabeer 1999, Kishor 2005, Mason 1986). These data provide a starting point for responding to directives emerging from the 1994 International Conference on Population and Development in

Cairo, the 1995 Fourth World Conference on Women in Beijing, and the Millennium Development Goals set out in 2000. These initiatives call for the continued investigation and analysis of the relationships between gender and demographic processes in the developing world (Becka & Dorao-Moris 2005, Moghadam 2005, Obaid 2008). While the DHS present the opportunity to respond to these issues, supplemental qualitative studies would contextualize DHS gender analyses.

To date, more DHS (and other survey) analyses have focused the relationship between gender and Population/Health/Nutrition (PHN) in Asia, and South Asia in particular (recent exceptions include Hindin 2005, Hindin 2006, Mumtaz, Slaymaker & Salway 2005, Takyi & Broughton 2006, Omariba 2006, Woldemicael 2009). Yet, the opportunity exists to make use of DHS data to examine these relationships in sub-Saharan Africa (Kishor 2005). Because of the wealth of scholars working on these themes in South Asia, the conceptual and methodological foundations of the DHS variables largely grew out of work in these settings (personal communication with S. Kishor, July 2009). The role and relevance of women's empowerment, however, is at least partly dependent on contextually specific historical and cultural gender systems (Kishor 2005, Desai & Johnson 2005). Thus, the foundations for these questions may not be wholly appropriate for the African context. Scholars must reflect on how to reliably measure women's status and empowerment in sub-Saharan African contexts. One way to begin this process is to supplement DHS data from sub-Saharan Africa with qualitative studies.

The first part of this paper provides background on the DHS measures of gender, outlining the general strengths and weaknesses, and the theoretical and conceptual frameworks that can inform DHS quantitative analyses of women's empowerment. This part also reviews some of the current research using the DHS, and argues that qualitative research is needed (1) to

guide the choice and operationalization of variables in quantitative models, (2) to examine the appropriateness of measures for the African context, and (3) to follow-up the findings of quantitative research. The second part of the paper provides more specific examples of where and how qualitative data might be used (1) to build a more complex understanding of the gender context, (2) to examine the validity of survey questions and use of survey measures in particular quantitative analyses, and (3) to elucidate the processes and mechanisms behind gendered experiences. Finally, some practical suggestions for, as well as limitations to, supplementing DHS data with small qualitative projects will be discussed.

### **DHS and Women's Status and Empowerment**

For the past 25 years, the MEASURE DHS (Demographic and Health Surveys) has provided technical assistance to governmental partners in developing countries to implement nationally representative household surveys. Over 200 surveys in 75 countries have been completed. With samples ranging from 5,000 to 30,000 households, surveys generally are repeated every 5 years, providing longitudinal data to assess trends in fertility, family planning, maternal and child health, as well as child survival, HIV/AIDS, malaria, and nutrition. These surveys are unique in that they provide standardized measures, making comparative analyses possible. The surveys aim to “advance[e] global understanding of health and population trends in developing countries,” with a strategic objective “to improve and institutionalize the collection and use of data by host countries for program monitoring and evaluation and for policy development decisions.” USAID is the primary DHS funding source ([www.measuredhs.com](http://www.measuredhs.com)).

DHS prior to 1999 collected an assortment of proxy measures of women's status such as headship, educational attainment, age at marriage, age at first birth, and labor force participation

(See Appendix A, Tables 1-6 for examples of questions asked). These measures provided a very general idea of women's position in society, but they largely provided trend data on sex differences in education, age at marriage and employment. Proxy measures of women's status and empowerment were important to early demographic research when direct measures were not available. However, they did little to explain women's roles in society or power relationships within their families and households and did not fully elucidate how gender influenced women's ability to make decisions about demographic processes, such as family size and contraceptive use (Watkins 1993). Thus, demographers studying gender questioned the value of proxy measures and highlighted the need for more direct measures of status and empowerment (Kishor & Neitzel 1996, Mason 1986, Watkins 1993).

With a focus on women's status and empowerment, the revision of DHS core questionnaires in the late-1990s reacted to this need for more direct measures of gender. Beginning in 1997 MEASURE/DHS began to integrate gender, as opposed to simply measures of sex differences, into their surveys (Kishor 2005, Kishor & Subaiya 2008). An advisory group of gender experts met to provide recommendations for additional questions to the core questionnaires (Kishor 2005). Since 1999 the core questionnaires have included direct measures of women's participation in household decisions, women's attitudes about wife beating, attitudes about situations when a woman can refuse to have sex with her husband, and obstacles women face in accessing healthcare (see Appendix A, Table 7 for a list of these new questions).<sup>1</sup>

In addition, in the late 1990s MEASURE/DHS created new, standardized modules to gather more detailed information on gender, women's status and empowerment. These modules,

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<sup>1</sup> While Macro/DHS makes every effort to keep the core and module questionnaires standardized, host country partners make the final decision about which questions and modules will be included on the survey. The host country has the prerogative to remove questions from the survey. Prior to national implementation of the survey, each questionnaire is pretested. The pretesting process provides the opportunity to alter questions in order to make them culturally appropriate or locally meaningful (personal communication with S. Kishor, July 2009).

which run alongside the core questionnaires, are available for measuring women's status and empowerment more extensively, domestic violence (DV), and female genital cutting (FGC).<sup>2</sup>

See Appendix B for a list of countries that have chosen to run these modules. For the purpose of this paper, however, the focus is on the questions contained in the women's core questionnaire, since these variables are more widely available.

### *Gender in the DHS: Advantages and disadvantages*

The DHS has conducted standard and/or special surveys in over 30 sub-Saharan African countries in the last decade [see Appendix B for specific years and countries]. Standard DHS from 1999 to present have several distinct advantages in measuring gender over earlier DHS and over smaller scale surveys. First, questions on gender are based on a conceptual framework developed by the gender advisory group. This includes the treatment of gender as a social construction and the emphasis on gender inequalities resulting from the social construction of gender (Kishor 2005). Second, DHS have nationally representative samples, providing the opportunity to generalize about women's position from the samples to the general population. These surveys are especially good for identifying things such as the prevalence of female genital cutting; they can even provide a snapshot of attitudes about gender norms in a society. Third, DHS questions are fairly uniform and provide the potential for comparison across contexts. Although they must be done with caution (Kishor & Neitzel 1996), in some cases these comparisons can be instructive (e.g. Hindin 2005, Kishor & Subaiya 2008, Mumtaz et al. 2005). Finally, once repeated in a country, DHS provide data for longitudinal analyses providing an

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<sup>2</sup> Countries that have implemented one of the women's status modules (Women's Status/Empowerment, Domestic Violence, or FGM) requested the inclusion of the module as part of the survey implementation. Sometimes the request for a particular module is driven by interest of local experts, or in having comparable data to a neighboring country (personal communication with S. Kishor, July 2009).

opportunity for a more sophisticated understanding of how changes in women's status and empowerment over time are associated with other demographic and health processes.

Several disadvantages of DHS in relation to measuring gender were pointed out in Kishor's (2005) report describing the process of adding direct measures of women's empowerment to the DHS. First, DHS has limited space, especially in the core questionnaire, which means that it can cover only a few aspects of gender. These questions arguably represent integral dimensions of women's empowerment; however, they do not fully address all dimensions or consider all spheres in which women can be empowered. Second, the requirement that questions be nearly uniform across countries severely limits the types of questions that can be asked. Questions had to be translatable and relevant in most contexts (personal communication with S. Kishor, July 2009). This restricts the level of specificity that DHS provide on women's empowerment. Finally, the requirement that questions be relevant to understanding population, health or nutrition outcomes also limited the scope of questions about gender in the DHS (Kishor 2005). The concern for women's empowerment only as it relates to population and health issues contributes to a lack of concern for, measurement of, and analysis of women's empowerment as an important outcome in its own right (Williams 2009).

In sub-Saharan Africa, in particular, there is another important drawback to the DHS measures of women's empowerment measures. The gender advisory group relied heavily on previous women's empowerment research from Asia, particularly South Asia. Because so much of the early research on gender had been done in South Asia, particularly in India and Bangladesh, the majority of the experts on the gender advisory panel (e.g. Alaka Basu, Sonalde Desai, Karen Mason, and Sydney Schuler) had expertise in Asia. While a few panel members were generalists, there were no Africa experts on the panel (personal communication with S.

Kishor, July 2009). This omission, while understandable, increases the likelihood of an over-emphasis on measures more appropriate for the Asian cultural context than for Africa. For example, in Asian contexts *purdah* limits women's freedom of movement, whereas limited mobility is less of an issue in most African contexts. More research is needed in Africa and other regions to identify culturally appropriate measures of women's empowerment.

A final and related disadvantage of the DHS measures of empowerment is their lack of grounding in qualitative research. Previous qualitative research, particularly in Asia, informed the creation of women's empowerment questions (personal communication with S. Kishor, July 2009). However, the only apparent contextual grounding of gender questions in other regions of the world comes from a process of pretesting the DHS questionnaires prior to national implementation (personal communication with S. Kishor, July 2009). This process helps determine, in some cases, questions for which interviewers are able to solicit answers and helps choose appropriate questions from those available. It does not, however, indicate how particular questions are understood within different cultural contexts, nor whether they provide meaningful or powerful measures of women's empowerment in that setting, nor suggest alternative questions to capture women's empowerment in that setting.<sup>3</sup>

### **Steps to strengthening DHS analyses of gender, women's status and empowerment**

One of the assets of the DHS questions on women's status and empowerment is the theoretical and conceptual framework on which the questions are based. However, researchers

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<sup>3</sup> The one exception is that FGC module was based on qualitative work done in Guinea ([www.measuredhs.com](http://www.measuredhs.com)). MEASURE/DHS has also completed a number of qualitative projects in sub-Saharan Africa related to gender. While not explicitly focused on women's status and empowerment, their qualitative projects on abortion, child health, FGC, and on AIDS and VCT uptake could shed light on issues related to gender dynamics in the areas where the studies took place ([www.measuredhs.com](http://www.measuredhs.com)). These data have not, however, been used to alter questions related to women's empowerment on core questionnaires or modules.

need to understand these frameworks before the benefit can be realized. A common problem in quantitative gender analyses of DHS is the selection of variables for analysis without grounding these choices in a theory of gender or a conceptual model of women's empowerment.<sup>4</sup> This results in vague research questions, problematic research designs, and unclear research findings. This section first explains the theory of gender underlying direct measures of women's empowerment and then describes the conceptual model of women's empowerment. Using this model is an important step in improving the ways in which DHS gender data is analyzed.

### *A Theory of Sex and Gender*

The DHS questions on women's empowerment are theoretically grounded on a distinction between sex and gender and the different roles they can play in influencing demographic processes. Sex is defined as biologically determined and influences health and demographic processes through physiological differences between the sexes (such as differential immunities/susceptibilities). Gender is "the socially constructed derivative of sex and encompasses the different roles, rights, expectations and obligations that culture and society attach to men and women" (Kishor 2005, p. 2). Significantly, gender differences are imbued with inequality—the roles and responsibilities assigned to women are generally subordinate to those of men—and it is the influence of this socially constructed inequality on demographic processes that measures of gender (or women's status, autonomy or empowerment) are meant to identify.

Identifying sex differences in health, for example, refers to finding differences that are biologically based, such as differential responses to the same treatment for heart disease between men and women. Identifying gender differences in health, on the other hand, focuses on

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<sup>4</sup> Both authors have taught in the Demography program at the University of the Witwatersrand and have supervised Masters and PhD theses there. The tendency to begin analyzing before grounding hypotheses and variable selection in a conceptual framework is one that came up regularly, regardless of whether the analysis focused on gender or not.

understanding how men and women's unequal social roles affect their health, such as differential behavioral causes of heart diseases in men and women. Both aspects of health are important, and likely interact, but they are also distinct. Gender differentials are generally more elastic and subject to influence by social interventions. A first step researchers need to take when analyzing DHS is to appropriately identify their use of either sex or gender.

### *Conceptualizing and Modeling Women's Empowerment*

The conceptual model of gender and women's empowerment provides a common framework for modeling women's empowerment. In addition to driving the selection of questions onto the DHS core questionnaires and modules, the framework can help guide both the choice of questions to use in quantitative models and the interpretation of results from the models. An important step in the process of doing research that includes measures of women's empowerment is identifying the type of measures being used. This section provides a conceptual model that provides a distinction between the types of measures of gender and women's empowerment that are available in DHS surveys.

There has been a lot of work done on conceptualizing women's empowerment and several conceptual models are available (see for example England 2000, Kabeer 1999, and for a review of models Malhotra et al. 2002). For the purposes of this paper the authors will use the conceptual model developed by Kishor (2000) and used in the comparative report of women's empowerment in DHS by Kishor and Subaiya (2008). Since Kishor is the senior gender advisor at MEASURE/DHS and supervised the process of integrating gender into DHS questionnaires, her conceptualization should fit closely with the measures available in DHS.

Kishor's conceptualization of empowerment distinguishes between the *setting*, *sources*, and *evidence* of empowerment. The *setting* includes the past or present circumstances of women

that are likely to influence the opportunities available to women and include measures of their living arrangements (e.g. co-residing with in-laws) and characteristics of people with influence over their opportunities (e.g. level of education or occupation of natal family) (Kishor 2000). The *sources* of empowerment are attributes of women that might be considered tools for empowering women, but with no guarantee that women will use these tools or exercise the power they promote (Kishor 2000). For example, education, media exposure, and ownership of assets are all attributes that might empower women. Finally, *evidence* of empowerment is found when women exercise control over their own lives. Measures of *evidence* are considered direct measures of empowerment and generally include women's reports of being in control of their own income, movements and decisions. The key advantage of DHS is that they provide more measures of *evidence* of women's empowerment than many large scale surveys.

The direct measures of empowerment in the DHS women's core questionnaire include questions about women's roles in decision making in areas such as ability to visit relatives and purchasing household items. [See Appendix A, Table 7.] These questions ask who has the final say in decisions with possible responses including: respondent, husband/partner, respondent and husband/partner jointly, someone else, respondent and someone else jointly. The measures suggest women's power in making decisions related to their freedom of movement, and access to and control over economic resources of the household. The responses to these questions are reports of women's control over their lives, however, rather than observed behavior. While the authors are not suggesting that women's perceptions of their role in decision making are inaccurate, there often are differences between reported and observed behavior.

The DHS core questionnaires also include questions measuring gender norms or attitudes about women's subordination to husbands – his right to beat her under certain circumstances and

her right to refuse sex under certain circumstances. [See Appendix A, Table 7.] These questions are thought to measure women's acceptance of gender inequality and lower status (Kishor & Subaiya 2008). Although they do not directly measure approval or disapproval of women having lower status, they are believed to capture the acceptance of norms allowing men sexual access to women and control over women through violence. These attitudes may suggest to policy makers how ready or able women are to participate in particular types of development programs. They do not, however, explicitly capture the actual experience of violence or practice of sexual capitulation. Thus, it is unclear whether respondents report the perceived socially acceptable response, personal beliefs, or their own experiences—while there is likely to be overlap among these categories, the questions lose leverage without knowledge of the ways in which the questions are being interpreted and responses are being presented.

Women's core questionnaires since 1999-2000 inquire directly about barriers to women's access to health care such as money, transportation, and needing permission to go. [See Appendix A, Table 7.] These questions help identify what aspects of women's status or empowerment may be blocking access to health care and are also direct measures of empowerment that provide evidence of women's exercise of control over their lives.

Finally, special modules on women's status, domestic violence and female genital cutting were also developed and are available for inclusion alongside the Standard DHS as supplemental modules. As the table in Appendix B shows, the modules on domestic violence and female genital cutting have been used much more often than the women's status module.

According to Kishor (2000), each element of women's empowerment, the setting, the sources and the evidence need to be considered when modeling women's empowerment; the key challenge is finding summary measures of each. Certain aspects of each element will always be

more relevant to a particular research question (and setting) than others; the challenge is to select the most relevant variables. Using a theory of gender and identifying an appropriate conceptual model can focus the choice of measures. The next section examines the findings of research using DHS data on gender that suggest the need for supplemental qualitative research.

### **Limitations of research on gender using DHS data**

Although the DHS provide data that are grounded in theory and measure women's empowerment directly, two main issues limit the power of research on gender coming from DHS surveys. First, there is no standard way of operationalizing measures of empowerment. Second, comparative analysis has made clear that cultural context matters a great deal: each aspect of women's empowerment and its determinants vary by setting. Below these issues are briefly reviewed to show, in general, how qualitative research can help overcome existing problems.

#### *Operationalizing Data*

Even though the questions in the DHS have been standardized, differing slightly by country, there is not a standard way of operationalizing the data. In other words, given the same questions, researchers create different summative measures of women's power in their models. For example, one of the main challenges facing researchers using the questions on decision making is how to summarize the answers. Researchers seem to disagree about the relative importance of making a decision on one's own vs. participating in a decision jointly with someone else. Some researchers give women credit only for making decisions on their own (for example, Desai & Johnson 2005), while some researchers look at patterns of decision making and construct measures that give women partial credit for decisions that they are part of but do not have the final say over (for example, Hindin 2005, Mumtaz et al. 2005).

Additionally different researchers operationalize gender or women's empowerment at different levels of aggregation. Although DHS capture decision making at the individual level, some researchers aggregate results to analyze the influence of the community gender context on health outcomes (e.g. Desai & Johnson 2005 include an estimation of community-level empowerment by creating cluster-specific estimates of women's ability to make independent decisions). Results from these types of analysis suggest that the community gendered context may either be more important than the individual context (Desai & Johnson 2005) or may mediate the effects of women's individual levels of empowerment (Matthews et al. 2005).<sup>5</sup>

Despite the near uniformity of questions in DHS, quantitative research on decision making using DHS data lacks unity and, therefore, also clarity. This fact in itself suggests that researchers need more information about what questions mean in order to inform their decisions about how to operationalize them. There are quantitative techniques such as factor analysis and structural equation modeling that enable researchers to make more informed decisions about what data to include in their models, however, these techniques require a working knowledge of the context and the meaning of the questions to the respondents. Therefore, a qualitative understanding of the questions is required for these methods to be most effective.

### *The Importance of Context*

Comparative studies of women's empowerment have also shown repeatedly that measures of women's status, gender, and empowerment are context specific (Kishor & Neitzel 1996, Kishor 2005, Kishor & Subaiya 2008). The determinants of these measures vary across contexts and the relationship of these measures to important demographic and health indicators

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<sup>5</sup> These findings echo the work by Mason and colleagues (e.g. Mason 1986, Mason & Smith 2000) from their five country study of women's status in Asia. They found that the importance of community effects outweighed individual characteristics' impact on PHN outcomes.

also varies across contexts. DHS Summary reports on women's status (Kishor & Neitzel 1996) on gender (Kishor 2005) and on women's empowerment (Kishor 2008) show that this holds true both for the direct measures of women's empowerment and for many of the measures of the setting and sources of empowerment as well.

Kishor and Neitzel (1996) point out that cross-cultural comparisons must be done very carefully because some indicators may not mean the same thing in different contexts. For example, findings that women's employment was highest in sub-Saharan Africa may be deceiving since women's employment in Africa is much more likely to be unpaid than women's employment elsewhere in the world (Kishor & Neitzel 1996). Similarly, the report found that female headship was more common in Africa than in Asia, but it is unclear whether the meaning of headship is comparable across contexts (Kishor & Neitzel 1996). Comparative findings also suggest, that some measures of gender in DHS may prove related to demographic and health outcomes in some contexts but not in others. For example, using DHS data it has been found that the relationship between women's decision-making power and child health is weakest in sub-Saharan Africa and strongest in South Asia (Desai & Johnson 2005). This finding may mean that in fact, women's decision making has less import to child health outcomes in Sub-Saharan Africa or it may suggest that the questions posed about household decisions in DHS are either less relevant to Sub-Saharan Africa or measure something different in the region than other regions. However, without more information it is unclear which the case is.

The comparative report of 23 indicators of women's empowerment in DHS shows conclusively that contextual differences matter both in what constitutes empowerment for women and what influences levels of empowerment among women (Kishor & Subaiya 2008). The report examined 12 indicators of participating in decision making and 11 indicators of

gender-role attitudes about women's refusal to have sex and men's right to beat their wives across 23 countries. The analyses suggest that questions about participation in different types of decision making may be measuring different types of power (even within the same context) which in turn are influenced by different correlates. The authors of the introduction to the report argue that "... any approach to increasing women's empowerment needs to be nuanced and tailored to specific country-level findings and settings. This conclusion follows from the fact that although variables such as education, employment, media exposure, and age at first marriage have a net positive association with the summary empowerment indicators across the 23 countries studied in this report, their relationship with each of the 23 indicators of empowerment varies across regions and, within regions, across countries" (Kishor & Subaiya 2008, pg xviii).

Findings from comparative studies, then, strongly suggest not only that measures of gender and women's empowerment are contextually specific, but also that researchers need to have a contextual understand of a setting in order to choose what measures are appropriate. Qualitative research, then, is vital for informing the operationalization of quantitative models of women's empowerment. Furthermore, a close look at comparative studies demonstrates that current measures of women's empowerment may be less useful in the African context. Qualitative research on women's empowerment in Africa is needed to improve the understanding of the gender context, which will both illuminate the meaning of current measures and possibly point to more appropriate measures of women's empowerment in the African context.

### *Conclusion*

Beyond taking steps to improve analysis of women's empowerment using DHS data, research findings suggest the need for follow-up qualitative research to help explain quantitative findings. For example, Hindin (2005) found that women with independent decision making

power are worse off than women with joint decision making power. Other research makes clear that women's decision making autonomy as measured in DHS is important for different health outcomes. For example, Desai and Johnson (2005) found that the impact of women's empowerment is greater for height-for-age than for child mortality or children's vaccination status (and that this effect is the smallest in sub-Saharan Africa – Uganda, Zimbabwe, Malawi, Mali, Benin). This suggests the mechanism through which women's empowerment affects health is rather specific. In both cases, qualitative research will help clarify the quantitative findings.

Qualitative research on gender and women's empowerment is needed to ground analyses of DHS for several reasons. First, qualitative research is necessary to determine the appropriateness of these measures for the sub-Saharan African context. Second, qualitative research is essential to informing the operationalization of DHS data in quantitative research. And finally, qualitative research is needed to follow-up findings from quantitative models using DHS data on gender. The next section discusses more specifically the use of small qualitative studies to improve research using DHS data.

### **Gaining from Qualitative Research**

*Despite the overall validity and reliability of large scale surveys, “the strength of comparative surveys...is also their weakness: Precisely because they are, at least in principle, collected in exactly the same way in all settings, the data they yield are limited when the goal of the research is to provide explanations for observed associations, differences between groups, or trends over time.” (Obermeyer 2005, pg 3).*

Given the limitations outlined above with the DHS data on women's status and empowerment, qualitative research is a vital tool for understanding the gender context and gender relations, for identifying what constitutes empowerment in the context, and for helping to

differentiate between different dimensions of empowerment, as well as components of each dimension. The qualitative data can then be used to guide the analysis of existing DHS data.

Ideally, the methodological process would be iterative, with a qualitative component as a starting-, mid- and end-point. In such a scenario, the qualitative data would be used to develop and validate questions for the survey. Then further qualitative data collection in conjunction with the survey would further the understanding of the gender context and frame quantitative models. And, finally, post survey qualitative data collection would help interpret quantitative findings. A large agency like the DHS does not have the means or mandate to implement this resource intensive process. Yet, there is still the opportunity to ground DHS data with qualitative work. Small qualitative projects can be used to corroborate, elaborate and initiate ways of understanding the DHS data (Rossman & Wilson 1985). The collection and analysis of qualitative data can help ensure that the quantitative models appropriately represent gendered dynamics, women's status and women's empowerment in the given setting.

A number of authors call for the use of mixed-methods research to better understand topics in which gendered relations are a central issue, i.e. reproductive health, sexual behavior and HIV, and development (Bamberger 2000, Helitzer-Allen, Makhambera & Wangel 1994, Obermeyer 2005). Measure/DHS itself endorses mixed-methods research with a program of qualitative data collection.<sup>6</sup> The aim of qualitative work at Measure/DHS mirrors the authors' line of reasoning for supporting DHS analysis with qualitative data collection, connecting theory

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<sup>6</sup> Measure/DHS has used qualitative projects to understand sensitive topics like how young women cope with an unexpected pregnancy (open-ended interviews in Accra, Ghana), produce better survey questions and pre-coded responses to those questions (semi-structured interviews and focus group discussions on FGC in Guinea) (Yoder, Camara & Soumaoro 1999), adjust questions that respondents did not understand as intended for an AIDS indicator study (observational study of survey implementation in Tanzania). The reason that the qualitative work at DHS does not fully meet the needs of gender scholars wanting to analyze DHS in a given country is simply that there is not enough person-power or funding to allow for the breadth of qualitative projects in which researchers might be interested (personal communication with P.S. Yoder, July 2009).

and research, and underscoring “the ways that qualitative and quantitative approaches to the study of social interaction can complement one another. This strategy focuses on local terms, concepts and practices to achieve understanding, and explores the social and cultural contexts within which events occur.” (<http://www.measuredhs.com/aboutsurveys/qr/methodology.cfm>)

Qualitative methods are better than surveys at “elicit[ing] sensitive information on determinants of behavior such as attitudes and social norms, as well as the cultural context in which these behaviors take place” (Helitzer-Allen et al. 1994: pg 75). In addition, qualitative data can get at the meaning of behaviors and attitudes related to gender, and both why and how they change over time (Obermeyer 2005). Local meanings and their relationship to broader social structures can be captured more fully through open-ended discussions, than with fixed-answer questions. Even when survey data point to correlations between two sets of variables, like those representing women’s status and empowerment with outcome measures of Population/Health/Nutrition (PHN), the processes and mechanisms involved remain hidden.<sup>7</sup> Narrative analyses of qualitative data help to elucidate these processes and mechanisms, even after the survey data has been collected and analyzed. By utilizing qualitative methods to capture (1) the gender context, (2) the meaning of questions, as well as (3) the processes and mechanisms behind the variables, it is possible to begin unpacking the “black-box” of gender, women’s status and empowerment, and relationships to PHN. The sections below outline particular ways of improving quantitative analyses related to these three issues through supplemental qualitative fieldwork; examples come from mixed-methods projects in a variety of contexts, although none explicitly use DHS data.

### *Capturing the gendered context of the research—enlarging the scope*

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<sup>7</sup> See figure 1 in Kishor 2005 for a conceptual outline of the relationship between sex, gender and Population/Health/Nutrition variables.

Gender is socially constructed and therefore is shaped by the same social, economic, disease burden changes that shape decisions about demographic processes (Hollos & Larsen 2004). Through reading literature from multiple disciplines, researchers can begin learning about and understanding social, economic, political, and public health contexts and change in a region (Obermeyer 1997, Randall & Koppenhaven 2004). In the case of conducting analyses on women's status and empowerment using DHS data, however, it is also important to understand the current contexts in which the surveys were conducted. For example, in their mixed-method study Hashemi et al. (1996) used qualitative data from rural Bangladesh to define and describe the setting including patrilineal descent, patrilocal residence, and *purdah* as examples of the gender systems; these data also pointed to the ways in which marriage, childbearing, education, and work are seen, defined, required, or forbidden for girls and women. Their qualitative research also has informed the construction and interpretation of questions about gender in large surveys such as the 1996 Matlab Health and Socioeconomic Status survey.

There are a number of qualitative methods that can help capture the gender context. These range from participant observation, which might provide information about geography and logistics of mobility, to focus group discussions (FGD), which might afford insights into local values and norms related to gender, to individual interviews (IDI), which might uncover ways that gender impacts women's experiences in their daily lives. For example, Obermeyer (2005) highlights qualitative research as, "document[ing] the ways in which information about health is filtered through local structures and incorporated into existing systems of understanding, especially in the case of HIV" (pg 7). Qualitative work can help structure conceptual and analytic frames of reference for analyzing recent DHS in sub-Saharan Africa.

While individual attitudes and behaviors are important, much of the women's status literature has pointed to the fact that women's empowerment at the community level often provides more explanatory power than do individual characteristics (Desai & Johnson 2005, Mason 1987, Mason & Smith 2000, Matthews et al. 2005). The DHS provide information at the individual level. Qualitative data that provide a general understanding of how gender is lived in a particular context could illuminate community level norms and attitudes.

### *Participant Observation*

One way in which participant observation could be useful to understanding both the general and gendered context of a setting is by simply recording information about the geographical layout. Two studies provide examples of why even this basic information can be crucial to understanding women's status and empowerment, and the survey data related to this topic. Hashemi et al.'s (1996) study in Bangladesh showed that, "...the layout of village paths and major roads, and geographic variability in access to markets and facilities influences many of the behaviors that comprise the empowerment indicators, such as mobility and making purchases in the market." Similarly, Schatz (2003) highlighted differences in the southern and northern study sites of the Malawi Diffusion and Ideational Change Project (MDICP) in terms of the geographic proximity of the market and health center to the study site villages, The differences greatly determined the distributions of freedom of movement questions on the 1998 MDICP survey in the two sites. In the northern, patrilineal site, women reported having more freedom of movement than in the southern, predominantly matrilineal area. Participant observation as part of a larger qualitative study revealed that this was largely due to the market and health center being embedded within the community in the northern site, but on a major road near a large trading center in the southern site. It was the "dangers" posed by the main road and

trading center that constrained women's mobility in the southern site. For DHS analyses, access to such insights could reveal whether there were geographic barriers to women's accessing health care. Knowledge of geography may expose different barriers across regions.

Participant observation could be used to assess objectively power or agency within households. This might include a researcher making long visits to a small number of households to see how decisions are made about childcare (feeding, dressing, educating), or purchases (small/large), or other household matters. While the small number of households will not be generalizable, these observations will give the researcher a better sense of the place from where survey data on related issues come. Madhavan and Townsend (2007) used household observation methods to understand child wellbeing and social connections in rural South Africa. While their project did not explicitly focus on gender, much could be learned about gender dynamics within the household through their data. Participant observation in households could improve DHS analyses of decision making, as well as gendered impacts on children's health and wellbeing.

#### *Focus Group Discussions*

Focus group discussions (FGD) can garner local values, norms ideas. Particularly in situations where a researcher wants to examine similarities and different in attitudes and values across various contexts with limited resources, FGD may be the best choice. A researcher could conduct a number of FGD in multiple settings rather than larger number of individual interviews in one setting, to get a sense of the expediency in assuming that questions have the same meanings across contexts. FGD could enhance DHS analyses by conducting FGD with men and women separately about situations in which it is acceptable for women to refuse sex or for men to beat their wives. Since these questions normally focus on women's responses, and seem to

measure different dimensions quantitatively, FGD on this topic could help determine which set of questions should be used for a particular type of analysis or in a particular context.

FGD may be particularly good at assessing community levels of empowerment because of the ability to capture both consensus and dissent about particular topics during group discussions. For example, as part of a larger study, Schuler, Bates and Islam (2008) conducted 16 focus groups in rural Bangladesh. The FGD were mainly with married women, but a few with men and teenagers to better understand issues of violence against women in the area. In the FGD, the participants discussed abused women's access to and likelihood of success within the legal system. The groups reached consensus about certain ideas related to how the justice system works, but some disagreement about how well the legal system works for domestic violence cases also emerged. While the majority felt that the woman is likely to be blamed, there was also some dissent. Because of the importance of community norming of concepts related to the ways gender impacts individuals' lives, focus groups are likely to be a good way to get insight into these norms before analyzing related DHS data.

### *Individual Interviews*

A third qualitative method that could be used to help elucidate the gender context is the use of individual interviews (IDI). IDI can be done with couples, but usually they are done with a single respondent. Semi-structured or open-ended interviews conducted by a trained interviewer provide the opportunity for individuals to explain their experiences, and how they perceive those experiences fitting into the larger context of the ways things happen within their community.

Baylies (2002) outlines work in Zambia on the ways gender impacts the experiences of AIDS within communities. The individual interviews highlight the ways in which the age and sex structure of AIDS affects households' ability to cope, compounding existing poverty. The

interviews also helped elucidate interactions through which gendered roles become important, namely headship and caregiving. This type of data collection would be helpful for DHS analyses related to the gendered impacts of HIV/AIDS on families, households, and networks.

In South Africa, Fox et al. (2007) conducted in-depth interviews with women who had experienced domestic violence. The interviews drew attention to the ways that "social and contextual factors condone abuse and exacerbate women's vulnerability to HIV" (pg 592). They found that with regards to abusive relationships the social environment influences women's power, or lack thereof, through a culture of silence around abuse and women not sharing their problems due to the confluence of women's shame and pride. Abuse thus becomes a taboo subject even though women in South Africa historically banded together to face problems. Instead, the social environment now encourages women to "tough it out" when in abusive relationship. Additionally, women's financial dependence on men and men's substance abuse were reported as important contributing factors. Finally, they found a pervasive belief that men are superior to women, thus reinforcing power relationships. While these issues may feature in the reasons individuals had for not always seeking help from violent situations, the overall themes were largely related to systematic and systemic gender power issues, which are essential to understand before analyzing data related to women's empowerment in such a setting. This type of information, obviously, would greatly complement an analysis of the DHS DV module.

Finally, Hashemi et al. (1996) present information about environmental limitations that their female respondents in Bangladesh encounter. The project examined micro-credit programs, so a focus was work and financial independence. It became clear through the individual interviews, that women had the desire to work, but lacked employment opportunities, limiting

their labor force participation. These data provide information important for understanding employment status of women across contexts, like DHS cross-national comparisons.

Having a sense of gender systems and context are essential to any type of analysis of women's status and empowerment and its relationship to PHN. While the examples given above range in size and scope, the underlying message is that a little knowledge about geography, gendered power relationships, and community norms and values can go a long way to provide context for quantitative analysis. This type of information is more efficiently and richly captured through open-ended, rather than fixed-choice questions.

### **Getting the meaning right: improving the validity of quantitative analyses**

The DHS relies on standardized questions across settings. Without qualitative data to help interpret how the questions are heard and answered, it is hard to know if there are standard understandings and interpretations of these questions across settings. In order for measures to be valid, respondents must understand the content of the question, remember accurately, give answer that correctly reflect their memory, and have the desire to provide truthful answers (Obermeyer 2005). An understanding of what the questions are actually measuring is essential to developing models of how empowerment is related to PHN outcomes, selecting which independent, dependent and control variables to use, and how to build any related indices.

If questions are in fact understood, interpreted and answered in different ways in different places, this is potentially very problematic for cross-national comparisons, or even for country level analyses where extreme variation exists across contexts (Mason & Smith 2000). A key to advancing quantitative DHS analyses of gender in sub-Saharan Africa is making use of qualitative data to improve variable choice and determine which questions are most likely to be

related to the outcome of interest. Two qualitative methods in particular could improve the validity of quantitative analyses by improving the understanding of the questions that go into those models—focus groups discussions and individual interviews.

### *Focus Group Discussions*

Focus group discussions (FGD) could be used to get consensus among a number of individuals about what dimensions of empowerment, and components of those dimensions, are seen from an emic perspective. FGD can be used to understand the ways individuals in a particular context use and connect particular meanings to words that from an outside perspective appear to be synonyms (Schuler et al. 2008). This knowledge can provide important insight into how to analyze data.

The decision making questions in the DHS provide an example of how information from FGD could be used to improve analyses. These questions attempt to reveal the distribution of power within the household by quantifying the weight given to a wife's desires versus those of her husband in making a decision. However, research has suggested that women may actually be better off in situations where they make fewer decisions independent of their partners (Hindin 2005). FGD could focus on the issue of decision making, including which decisions women are included in, and in what ways, whether women want to be apart of larger decisions, and why or why not. The group discussion that ensues, and the emergent insights would go a long way in highlighting which decision making questions might hang together in terms of meaning, and how the responses (wife decides, husband decides, decide jointly) might be ordered in terms of women's power in decision making.

Qualitative research that illuminates how decisions making questions are answered, particularly within new contexts, could greatly improve the use of DHS. Furthermore, the same qualitative research could inform how to operationalize these measures in statistical models.

#### *Individual interviews*

As with the FGD, individual interviews could be used to ask about specific survey questions. In this scenario, a sample of individual similar in age, marital status, education level, et cetera, of those in the DHS survey could be selected and the same gender questions under review could be reasked of the respondents. Rather than moving from one pre-coded question to the next, however, the interviewer could engage with the respondent in an semi-structured conversation following each question to understand how the respondent heard the question, what her interpretation of its meaning was, what she was thinking about (a particular situation, occurrence or a cumulative notion of many experiences) when she selected her response to the question (Schatz 2003, 2009).

Like in the FGD, more detailed questions could be asked about when and how women have influence in decisions in the household, and whether she feels she has more power when she makes decisions alone or jointly with her partner. Indeed, two very different scenarios might conclude with a woman's desires being met, and it is unclear in which she would feel more empowered without asking her view. In one situation, the couple may have had the same desires from the start and virtually no negotiation was necessary—the woman made her desires known and the item was purchased. In the second situation, the couple may have disagreed initially and only through negotiation, bargaining, and/or compromise did the couple agree and purchase the item, fulfilling the woman's desires. These two situations would appear identical in the fixed-choice questions but could be reported differently, as either joint or independent decisions by the

woman. Through reasking these questions and allowing respondents to give examples in an open ended discussion, the ways in which the questions might have been understood and answered on the DHS survey may be clearer. This provides the researcher and future analyst with a better understanding of what a “yes” or “no” response to a particular question might mean in that context, and clarify if there are different situations in which an affirmative response is associated with a sense of more empowerment and other situations where an affirmative response is associated with a sense of less empowerment.

While the qualitative data collection and analysis have a tendency to make things messier for a while, capturing the complicated attitudes related to a topic, like gender/women’s status/women’s empowerment provide important insight for appropriately analyzing the DHS data. In Tanzania, Hollos and Larsen (2004) used just this approach—qualitative and ethnographic data directed the measures used in statistical analyses to capture a certain quality or typology of conjugal relations (the typologies were themselves emerged from the qualitative data). They used the IDI to select variables for the quantitative analysis and to determine how to structure the overall analysis. They then used the survey analysis to explore how generalizable their qualitative typologies were, and which types of conjugal relations were associated with particular demographic behaviors like contraceptive use. While their qualitative and quantitative analyses largely supported and confirmed each other, a number of factors thought to be important for contraceptive use did not come through in the survey. For example, the stage of payment of brideprice and whether partner choice was determined on one’s own or by one’s parents did not shape marital relations. When these unexpected results arose, Hollos and Larsen could, and did, return to the qualitative data to find explanations.

Qualitative data provides additional information that can be invaluable for analyzing DHS. Small qualitative projects can help researchers understand what questions are measuring, which questions to use in their models, and how best to operationalize the available data. Qualitative projects do not have to be representative of the entire country, rather purposeful samples in select areas can still be used to provide insight as to what DHS survey questions mean in a particular locale and, therefore, how they should be employed in quantitative analyses.

### **Getting at processes and mechanism**

Trend data is extremely important, as is being able to examine the level of women's empowerment and status across contexts and over time. However, without a sense of the processes and mechanisms that drive the trends and underlie cross-national differences, it is difficult to develop programs to improve women's lives, and address needs related to PHN. Qualitative methods can help to support trend data by providing access to local meanings and how they connect to broader social structures. By offering important insights into the processes, mechanisms, and even to the ideas and emotions (Obermeyer 2005) behind relationships, behaviors, values and attitudes that help determine both the gender context and the ways in which individuals make decisions about demographic processes, qualitative methods underscore the *how* behind decision-making and gender relations. The methods previously discussed, such as FGD and IDI can provide insight into processes and mechanisms as well.

Qualitative research provides a unique opportunity to pay attention both to what is being said, but also to take note of where the silences lie (Obermeyer 2005). Listening to how individuals and groups talk about a topic may reveal jointly held "contradictory" beliefs, and things that prevent behavior change, as well as culturally specific mechanisms through which

these patterns emerge. Whereas DHS may reveal certain attitudes about the situations in which domestic violence is justified, it reveals little about the logic or emotions behind those attitudes. In other contexts, qualitative research has generated significant insight to women's knowledge, fears, and responses to domestic violence (e.g. Fox et al. 2007, Schuler et al. 2008).

Qualitative data can provide the meaning behind patterns that emerge from the quantitative data. For example, survey data had shown that few women in Bangladesh sought assistance for domestic violence (DV). Schuler and colleagues' (2008) qualitative study supplemented the survey data, giving alternative scenarios for why such a low percentage of women report having sought help for DV. Two explanations emerged from the qualitative data, (1) neighbors or relatives might have intervened, which meant the women did not need to seek help herself, or (2) women might not consider fleeing to parents as seeking help, if the husband then reforms, and the woman returns, as a number of women in their study described. Schuler et al. (2008) also used qualitative methods to understand why women who experience domestic violence in Bangladesh do not make use of either the formal or local justice systems. It turned out that women did not fully understand the laws of divorce or their rights related to those laws. They were hesitant because they lacked money to pay the associated fees, and they feared social stigma and losing custody of their children if they pursued a case. From the FGD a consensus emerged that women do not bring cases because they get blamed for the abuse and that the system favors the rich over the poor.

Qualitative data is also valuable for providing insight about important population and health outcomes that DHS are particularly designed to measure. For example Baylies (2002) work in Zambia picked up information about the how the staging and impact of HIV/AIDS differ across households within the same community. The data reveal that while kin and community

help families in need, AIDS can saturate the resources of not just a family but entire networks and communities, overburdening them so that new and different responses are needed. It is the understandings of the mechanisms and processes through which AIDS affects households that highlights the ways that gender mediates roles, relationships, and responsibilities within families and across households. Her findings would have been difficult to capture with survey data, but these very data would help in the interpretation of models trying to understand the relationship between women's status and HIV/AIDS related outcomes, in DHS data.

The goal of supplemental qualitative work is to improve the conceptualization for and interpretation of DHS analyses. Other authors have forwarded similar ideas of the need for mixed-methods research to deepen scholars' understanding of women's status, empowerment and PHN outcomes. In their study of marriage and contraceptive use in Tanzania, Hollos and Larsen (2004) claim, "an ethnographically informed understanding is essential for the appreciation of culture-specific variables that account for the dynamics of particular marital unions." (pg 274). The same claims could be made for other issues related to gender, women's status and empowerment. As this paper and their paper argue, "the combination of qualitative and quantitative methods should help move the field in realizing this goal." The goal being a better understanding of how gender, and related issues like marriage, function in a particular context, and conceptually grounded quantitative analyses based on qualitative findings.

### **Drawbacks of qualitative supplemental research for DHS**

While the authors would like to encourage the use of supplemental qualitative data to support DHS analyses, there are some limitations that are important to keep in mind. One of the main drawbacks of qualitative work is that it is resource intensive. Qualitative fieldwork takes a

lot of time, planning, funding, and attention from the principal investigator. However, “open-ended questions about current opinions or narratives of past experience may appear labor-intensive but are more likely to yield high-quality information than is a simple repetition of standardized close-ended questions.” (Obermeyer 2005: pg 7). So, although they are time and resource intensive, the rewards of qualitative research in enriching knowledge of a place and deepening the conceptualization of DHS analyses might make it a worthwhile venture.

The scope of qualitative projects that might supplement the DHS could range from a small project conducted by a Masters or PhD student in order to complement their quantitative thesis analyses, to a much larger project by an established researcher. In the former case, perhaps a small number of FGD (5-10) or IDI (20-60) could be conducted in one site, with a few weeks spent in the site observing and taking notes on the context, geography, and gender interactions. This would provide a means of better understanding the context, gender relations, and specific questions utilized in the quantitative analysis. In the latter case, a multi-sited, multi-method project involving larger numbers of FGD and/or IDI might be more appropriate. In each case the goals are similar, but the scope should be determined by the resources available to the individual. This paper does not set out to describe how to conduct qualitative projects, but rather to provide justification for supplementing DHS. For those interested in conducting qualitative projects, many good texts are available to use as guides (e.g. Bryman 2006, Esterberg 2002, Teddlie 2009).

#### *Specificity vs. generalizability*

One area in which consideration and caution needs to be taken is in thinking through the size and scope of qualitative data collection to supplement DHS data. Since DHS are country-level, it may be hard to decide how to match qualitative data collection to the country-level

quantitative data. Hashemi and colleagues (1996) who worked in just six villages within Bangladesh found that "many of the specific details of women's lives vary because of small differences in social norms and because the geography, the physical infrastructure, and the configuration of social and economic opportunities varies from place to place" (pg 637). While there is often the opportunity to break down the data by urban/rural residence, region, or ethnic group, the researcher will still need to make a decision about where to conduct the qualitative study, and how to match it with the DHS. Obviously one option is to collect qualitative data in multiple sites (e.g. a rural and an urban site, in various regions of a country if there are distinct regional differences, or among several different ethnic groups, if ethnic or religious traditions related to gender differ greatly). Particularly researchers new to qualitative methods must be careful, however, of not trying to do too much, since single site qualitative projects can be resource intensive, and multi-site projects even more so.

### *Biases*

Qualitative research, like quantitative research is at risk of various types of bias. In qualitative studies, non-probability sampling is common, but also can be rife with selection bias. Fox et al. (2007) use their qualitative data to provide intimate portrait of (1) gender power relations and the ways violence and abuse influence women's experiences with partners and spouses, (2) connection of DV to economic dependence and (3) relationship of both to risk of HIV. One of the reoccurring themes in their work is the ways that gendered communication problems exacerbate abused women's situations. This paper provides important insights into the gender context in South Africa, but as the authors point out, there needs to be caution in generalizing their results to all women, or even women who have suffered other types of abuse.

Their sample was made up of self-selected women who were seeking support for domestic violence; these factors likely had a significant impact on the findings.

In addition, Fox and colleagues (2007) warned of potential bias from participants' desire to protect their self-interest in reporting their experiences. The "self-reported nature of women's own stated risk behaviors may be a potential source of bias if social desirability factors made women uncomfortable disclosing their own sexual risk taking apart from that of their partners." (Fox et al. 2007, pg 598). Thus, when conducting, collecting, and analyzing qualitative data, as with quantitative data, it is important to be aware of potential sources of bias, including selection bias and the ways in which the interests of the respondents may shape the ways they answer the questions.

## **Conclusions**

Why do the authors argue for the collection of qualitative data to supplement the DHS when it would be cheaper, faster and easier to just analyze existing DHS data? This paper makes a case that by improving the conceptual basis and contextual grounding of the quantitative analyses qualitative data would strengthen DHS findings in sub-Saharan Africa. Obermeyer (2005) suggests that supplemental qualitative work should "do more than simply add variables" to capture particular behaviors, but it also "must investigate what these behaviors mean and why they change" (pg 4). By using multiple methods—observation, interviewing, open-ended responses--going beyond what surveys can pick up through pre-coded response categories, qualitative methods can help understand the perspective of the actors, in order to examine how individuals "try to make sense of complicated situations with insufficient information." (Obermeyer 2005: pg 4).

As this paper has shown, utilizing qualitative methods to compliment DHS analysis is particularly important for sub-Saharan Africa. Not enough research has questioned how successfully dimensions of empowerment created from conceptual frameworks forged in Asia translate to the African context. And, existing comparative research has clearly demonstrated that the dimensions and determinant of women's empowerment vary across countries and reasons. More in-depth investigations are needed to accompany the DHS to describe the gender context in which the data were collected, determine the local meanings of questions, and to elucidate the processes and mechanisms that help determine gendered relationships, attitudes and PHN behaviors.

While the authors are recommending qualitative studies to supplement DHS analyses, in longer run they hope that any qualitative studies done to supplement will be shared with DHS so that MEASURE/DHS has a better understanding of how well the DHS is capturing gender, women's status, and empowerment in various settings. And, while the authors recognize the overall need for standard surveys, they encourage the DHS to make use of this information to change, adapt, improve, or create measures that will better capture these concepts on future modules or revisions of the core questionnaires in Africa. As more mixed-method data and analyses are available, and more is understood about gender, women's status and empowerment in African settings, there may come a time when it seems appropriate to sacrifice uniformity for specificity. If scholars stop trying to generalize about what empowerment is, they may be able to generalize more about what empowerment does. In other words the impact of women's empowerment may be universal, even if women's empowerment itself is always context specific. Better grounding of quantitative data will allow researchers to begin to question the best ways to measure and compare gender, women's status and empowerment across settings and over time.

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## APPENDIX A: Examples of DHS questions used to measure women’s status and empowerment

**Table 1. Literacy and educational attainment**

Question no.	Question working on women’s survey	Coding of responses
107	Have you ever attended school	Yes No
108*	What is the highest level of school you attended: primary, secondary, or higher?	Primary Secondary Higher
109*	What is the highest (grade/form/year) that you completed at that level?	Grade
111-112 (Literacy)*	Women with less than secondary schooling are asked two questions concerning literacy. Respondents are given a simple test of their ability to read (111). This test replaces the question in earlier versions of the DHS core questionnaires that asked the respondent for a self-assessment of her literacy. A question has been added on participation in literacy-promoting programs (112).	
114-116 (Exposure to Media)	Exposure to modern ideas and values through the press, radio, and television are associated with the adoption of fertility control. These questions are intended to provide a simple index of such exposure.	

\*In latter DHS models: 108, 109, 704, 705 questions are revised according to the local education system. 111-112 In countries with an interest in measuring participation across a number of literacy programs, additional multiple-response questions may be included for women who participated in a literacy program.

**Table 2. Employment and occupation**

The interest in women’s employment and earnings derives both from the recognition of these topics as important aspects of women’s status and from their relevance to various population, health, and nutrition outcomes.

Question no.	Question working on women’s survey	Coding of responses
707	Aside from your own housework, are you currently working?	Yes No
708	As you know, some women take up jobs for which they are paid in cash or kind. Others sell things, have a small business or work on the family farm or in the family business. Are you currently doing any of these things or any other work?	Yes No
709	Have you done any work in the last 12 months?	Yes No
710	What is your occupation, that is what kind of work do you do?	
712	Do you work mainly on your own land or on family land, or do you work on land that you rent from someone else, or do you work on someone else’s land?	Own land Family land Rented land Someone else’s land
713	Do you do this work for a member of your family, for someone else, or are you self employed?	For family member For someone else Self-employed

**Table 3. Age at first marriage**

The age at which marriage begins, although an increasingly imperfect indicator of the beginning of exposure to the risk of pregnancy, is highly correlated with fertility. A woman is asked to supply month and year of her first union, or if the year is not remembered, the age at which she first started living with her partner.

Question no.	Question working on women’s survey	Coding of responses
511	In what month or year did you start living with your husband/partner?	Month
512	How old were you when you started living with your husband/partner?	Year
514	How old were you when you first had sexual intercourse (if ever)?	Never/Age in years

**Table 4. Contraceptive use**

The series of questions on knowledge differs from that in earlier DHS questionnaires in that 1) additional methods have been included in the list, 2) the diaphragm is now recorded separately rather than being combined with foam and jelly, 3) in recording the knowledge information, no distinction is made between methods reported spontaneously and methods recognized after probing.

Question no.	Question working on women's survey	Coding of responses
301-303	<p>Knowledge and use of contraceptive methods (questions asked after describing method as outlined below): Do you know about this method?</p> <p>Have you ever used it?</p> <p><i>Female sterilization:</i> Women can have an operation to avoid having any more children. <i>Male sterilization:</i> Men can have an operation to avoid having any more children. <i>Pill:</i> Women can take a pill every day to avoid becoming pregnant. <i>IUD:</i> Women can have a loop or coil placed inside them by a doctor or nurse, <i>Injectibles:</i> Women can have an injection by a health provider that stops them from becoming pregnant for 3 or more months. <i>Implants:</i> Women can have several small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for one or more years. <i>Condom:</i> Men can put a rubber sheath on their penis before sexual intercourse. <i>Female condom:</i> Women can place a sheath in their vagina before sexual intercourse. <i>Diaphragm:</i> Women can place a thin flexible disc in their vagina before intercourse. <i>Foam or Jelly:</i> Women can place a suppository, jelly or cream in their vagina before intercourse. <i>Lactational Amenorrhea Method:</i> Up to 6 months after childbirth, a woman can use a method that requires that she breastfeed frequently, day and night, and that her menstrual period has not returned. <i>Rhythm or periodic abstinence:</i> Every month that a woman is sexually active she can avoid pregnancy by not having sexual intercourse on the days of the month she is most likely to get pregnant. <i>Withdrawal:</i> Men can be careful and pull out before climax. <i>Emergency contraception:</i> Women can take pills up to three days after sexual intercourse to avoid becoming pregnant.</p>	<p>Yes No</p> <p>Yes No</p>
	Have you ever heard of any other ways or methods that women or men can use to avoid pregnancy?	Yes No
304-312	Probes on ever use of contraception, current use, method currently using	
	Have you ever used anything or tried in any way to delay or avoid getting pregnant?	Yes No
	What have you used or done?	
	Are you currently doing something or using any method to delay or avoid getting pregnant?	Yes No
	Which method are you using?	
623	Would you say that using contraception is mainly your decision, mainly your husband's/partner's decision or did you both decide together?	Mainly respondent Mainly husband/partner Joint decision Other

**Table 5. Control over own earnings (most surveys)**

These questions are meant to determine the extent to which women are engaged in cash economy and as a measure of women's autonomy, who it is that decides how the respondent's earnings will be spent.

Question no.	Question working on women's survey	Coding of responses
716	Are you paid or do you earn in cash or kind for this work or are you not paid at all?	Cash only Cash and kind In kind only Not paid
717	Who mainly decides how the money you earn will be used?	Respondent Husband/partner Respondent/husband/partner jointly Someone else Respondent and someone else jointly
718	On average, how much of your household expenditures do your earnings pay for: almost none, less than half, more than half or all?	Almost non Less than half About half More than half All None, her income is all saved

**Table 6. Spousal age and education differences**

This information provides additional insight into socioeconomic and couple level context within which population, health, and nutrition related behaviors take place. In addition, interspousal differences in age, education, and occupation have been associated with differences in a woman's relative bargaining power compared with her husband, with important consequences for health.

Question no.	Question working on women's survey	Coding of responses
702	How old was your husband/partner on his last birthday?	
703	Did your (last) husband/partner ever attend school?	Yes No
704*	What was the highest level of school he attended: primary, secondary or higher?	Primary Secondary Higher Don't know
705*	What was the highest (grade/from/year) he completed at that level?	Grade Don't know
706	What is your (last) husband's/partner's occupation? That is, what kind of work does he mainly do?	

Table 7. Questions on all DHS 1999/2000 and later

Question no.	Question working on women's survey	Coding of responses
<b>Women's participation in household decisions</b>		
Women's participation in decisions that affect their lives is an important indicator of their empowerment.		
719	<p>Who in your family usually has the final say on the following decisions:</p> <p>Your own health care            Making large household purchases            Making household purchases for daily needs            Visits to family or relatives            What food should be cooked each day</p>	<p>Respondent            Husband/partner            Respondent/husband/partner jointly            Someone else            Respondent/someone else jointly            Decision not made/not applicable</p>
<b>Women's attitudes toward wife-beating by husbands</b>		
By presenting women with different scenarios, this question evaluates the acceptability of spousal violence among women. The degree of acceptability of such violence provides insight into women's attitudes with regards to gender roles and their sense of entitlement with regard to their own rights.		
721	<p>Sometimes a husband is annoyed or angered by things that his wife does. In your opinion, is a husband justified in hitting or beating his wife in the following situations:</p> <p>If she goes out without telling him?            If she neglects the children?            If she argues with him?            If she refuses to have sex with him?            If she burns the food?</p>	<p>Yes            No            Don't know</p>
<b>Women's opinions on whether a woman can refuse sex to her husband</b>		
This question helps to assess a woman's sense of empowerment through her normative beliefs about sexual rights. The scenarios listed are those for which most people would agree that a woman should feel justified in refusing to have sexual relations with her husband.		
628	<p>Husbands and wives do not always agree on everything. Please tell me if you think a wife is justified in refusing to have sex with her husband when:</p> <p>She knows her husband has a sexually transmitted disease?            She knows her husband has sex with other women?            She has recently given birth?            She is tired or not in the mood?</p>	<p>Yes            No            Don't Know</p>
<b>Hurdles faced by women in accessing health care for themselves</b>		
Several barriers-cultural, social, and financial- can prevent women from accessing health care for themselves. This question helps to identify some of these barriers. The information can help inform interventions designed to increase women's access to and use of health services.		
490	<p>Many different sectors can prevent women from getting medical advice or treatment for themselves. When you are sick and want to get medical advice or treatment, is each of the following a big problem or not?</p> <p>Knowing where to go            Getting permission to go            Getting money needed for treatment            The distance to the health facility            Having to take transport            Not wanting to go alone            Concern that there may not be a female health provider</p>	<p>Yes            No</p>

**APPENDIX B: DHS in sub-Saharan Africa 1999-2009**

Country	Yr of Standard DHS	Yr/type of Special DHS	Yr Qual	Yr of Women's Status Module
Angola	2006, 2007	MIS	NA	NA
Benin	2001, 2006	NA	NA	2001(FGC)
Burkina Faso	2003, 2009	NA	NA	2003(FGC)
Cameroon	2004, 2009	NA	NA	NA
Chad	2004	NA	NA	NA
Congo (Brazzaville)	2005	NA	NA	NA
Congo Democratic Republic	2007	NA	NA	2007(DV)
Cote d'Ivoire	2005,2009	NA	NA	2005(DV)
Eritrea	2002	NA	NA	2002(FGC)
Ethiopia	2000, 2005	NA	NA	2000(FGC)
Gabon	2000	NA	NA	NA
Ghana	2002, 2003, 2006, 2007, 2008	2002-MCH SPA, 2006-MICS, 2007-Special	2001, 2002	NA
Guinea	2005	NA	1999, 2002	2005
Kenya	2003, 2004, 2008-2009	2004- HIV/MCH SPA	NA	2003(FGC), 2003(DV)
Lesotho	2004	NA	NA	NA
Liberia	2007, 2008-2009	2008-2009 MIS	NA	2007(DV)
Madagascar	2003/2004, 2008	NA	NA	NA
Malawi	2000, 2004, 2009	NA	2003	2004(DV)
Mali	2001, 2006	NA	2000, 2002	2006, 2001(FGC), 2006(DV)
Mauritania	2000/2001, 2003	2003-special	NA	2000/2001(FGC)
Mozambique	2003, 2009	NA	NA	NA
Namibia	2000, 2006/2007, 2009	2009-HIV/MCH SPA	NA	2006/2007
Niger	2006	NA	NA	NA
Nigeria	2003, 2008	NA	NA	2003(FGC)
Rwanda	2000, 2001, 2005, 2007	2001-MCH SPA, 2007-Interim, 2007-HIV/MCH SPA	NA	2005(DV)
Sao Tome and Principe	2007	NA	NA	NA
Senegal	2005, 2006, 2008	2006-MIS, 2008-MIS	NA	NA
Sierra Leone	2008	NA	NA	2008
South Africa	2003	NA	NA	NA
Swaziland	2006/2007	NA	NA	2006/2007
Tanzania	2003, 2004, 2006, 2007/2008, 2009	2006-HIV/MCH SPA	2004	NA
Uganda	2000/2001, 2004, 2006, 2007, 2009	2007-HIV/MCH SPA, 2009-MIS	2005, 2005	2006(DV)
Zambia	2001/2002, 2005, 2007	2005-HIV SPA	NA	2007, 2001/2002(DV), 2007(DV)
Zimbabwe	2005/2006	NA	NA	2005/2006, 2005/2006(DV)

**MIS:** Malaria Indicator survey, **DV:** Domestic Violence, **HIV SPA:** HIV Service provision assessment; **MCH SPA:** Maternal and child health service provision assessment

**Qualitative studies:** Ghana: Complementary feeding of infants (2001), Abortion among adolescents (2002); Guinea: Female circumcision (1999), Signs of childhood illness as recognized by mothers (2002); Malawi: Public interest in being tested for HIV (2003); Mali: Complementary feeding of infants (2000), Obtaining informed consent for an HIV test in a survey (2002); Tanzania: Understanding of survey questions in an AIDS Indicator Survey (2004); Uganda: Giving blood for HIV testing and getting test results in a survey (2005), Social context of VCT and disclosure of HIV test results (2005)