**Title: Going beyond the surface: Gendered intra-household bargaining as a social determinant of child health and nutrition in low and middle income countries.**

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**Acknowledgements:**

**We wish to acknowledge UNICEF’s role in commissioning and funding this review. We are also grateful for the assistance provided by gender and child health experts from around the world who offered advice and information on the issues outlined in the review.**

**Abstract**

Socio-economic factors can play a significant role in determining child health and a growing body of research highlights the importance of gendered social determinants, such as maternal education and women’s status, for mediating child survival. This narrative review of evidence from diverse low and middle income contexts demonstrates the significance of addressing the gender dimensions of child health through the lens of intra-household bargaining power and process. The findings focus on two main elements of bargaining: the role of women’s decision-making power and access to and control over resources; and the importance of household headship, structure and composition. The paper discusses the implications of these findings in the light of their significance to lifecycle and intersectional approaches to gender and health. The review demonstrates that gender constitutes a key social determinant of child health and nutrition and must therefore be considered an integral component of the broader commitment of the international health community to ensuring equity in child health and nutrition. Child health and nutrition interventions will be more effective, equitable and sustainable if they are designed based on gender-sensitive information and continually evaluated from a gender perspective.

**Introduction**

Income poverty and rural location are recognised as being the strongest social inequities that mark child mortality. However there is also evidence that intra-household relations, particularly those which rely on gendered social and cultural norms mediate aspects of child health and nutrition and impact on infant and child mortality. For example, a large body of evidence demonstrates the strong link between women’s education and child survival ([Caldwell & McDonald 1982](#_ENREF_10); [Chen & Li 2009](#_ENREF_14); [Cleland & Ginneken 1988](#_ENREF_15); [Gokhale et al. 2004](#_ENREF_23); [Hobcraft 1993](#_ENREF_29); [Schnell-Anzola, Rowe & LeVine 2005](#_ENREF_43)). However, there is less research on how or why education makes such a difference, although it is thought to be linked to women’s increased status and decision-making power within the household which in turn can increase mothers’ mobility outside the community as well as their use of health care and their ability to negotiate health systems effectively, their increased knowledge, skills and responsiveness to new ideas (Houweling & Kunst 2010). It is estimated that about half the effect of maternal education is linked to household wealth (through women’s improved earning potential); better living conditions and ability to pay for health services (ibid.).

In addition, a body of research spanning more than 20 years focusing on aspects of gender and child health and nutrition has found links between women’s status and child survival, showing that children benefit when their mother’s status is raised ([Apodaca 2008](#_ENREF_4); [Caldwell & Caldwell 1991](#_ENREF_11); [Heaton et al. 2005](#_ENREF_28); [Smith & Haddad 2000](#_ENREF_46)). It has been hypothesised that this is related (among other things) to increased decision-making power and increased access to and control over resources.

In order to explore further why gendered factors such as maternal education and status matter to child health and nutrition, we undertook a narrative literature review of women’s status and bargaining power and process and gender divisions of labour with regard to child health and nutrition in low and middle income countries. We also searched published and grey literature for evaluations of interventions that address these gendered processes. To illuminate one of the processes through which factors such as maternal education influence child survival outcomes, this paper will review the evidence on two elements of intra-household bargaining power and process: 1) women’s decision-making power and access to and control over resources; 2) household headship, structure and composition.

Bargaining as a concept was established by Sen’s (1990) theory of ‘intra-household bargaining’ which illustrates how inequality between different members of a household effects decision-making processes and allocation of resources. There is a large body of research exploring intra-household bargaining within development studies (see for example Bruce 1989 and Agarwal 1997). The concept of intra-household bargaining has also been employed in relation to determinants of child health and nutrition (see for example Castle 1993; Marinda 2006; Hampshire, Panter-Brick & Casiday 2009). Key reviews have used this evidence to highlight the importance of exploring aspects of gender relations mediating young child health and nutrition ([Engle, Castle & Menon 1996](#_ENREF_19); [Messer 1997](#_ENREF_35)). This paper brings these findings up-to-date and focuses on unpacking the components of intra-household bargaining mentioned above: decision-making and access to and control over resources and household headship, structure and composition.

Researchers have extensively explored gender differences between children to highlight where bias against females leads to poorer outcomes for girls (see for example Chen, Huq & D’Souza 1981; Ganatra & Hirve 1994; World Health Organization 2011). Instead, this review focuses on gender relations mediating infant and young child care for both sexes in contrast to examining how broader aspects of gender inequality lead to differential care for boys and girls.

**Methods**

We adopted a narrative approach to reviewing the studies included in this paper. Such an approach involves synthesising primary studies in order to explore heterogeneity descriptively rather than statistically and which is embedded in a constructivist approach ([Petticrew & Roberts 2006](#_ENREF_40)). The search strategy aimed to capture both academic and ‘grey’ literature and included the following phases conducted between March and September 2011, with a further database search conducted during May 2012.

The first phase involved a systematic search of academic literature via the Discover Database which combines 33 of the leading health and social sciences databases (such as Medline, CINAHL, Global Health, Science Direct, Scopus, Sociological Abstracts, among others). Search terms were tested for their appropriateness and were grouped under three themes: gender, health and location (see Table 1 below).

Table 1 Search terms used

|  |  |  |
| --- | --- | --- |
| **Gender layer**  Gender OR  Wom\* status OR  Wom\* role OR  M\* role OR  Wom\* rights OR  Wom\* labour OR  Wom\* working OR  Maternal education OR  Maternal literacy OR  Masculin\* OR  Family relation\* OR  Parent\* | **Health terms layer**  Infant\* OR Child\* AND Health  AND  Nutrition\* OR  Immunization OR  Survival OR  Health seeking behaviour OR  Treatment OR  Barriers to healthcare OR  Home based care OR  Child care OR  Breastfeeding OR  Breast feeding OR  Feeding | **Location layer**  Developing countr\* OR  Global South OR  Middle income countr\* OR  Low income countr\* OR  Africa OR  Latin America OR  Asia OR  Poverty OR  Poor countr\* OR  Third World |

The search included literature between 1970 and May 2012. The search combined the layers in turn where terms were found in the title, abstract or key words. This resulted in 3,911 results that were scanned for their relevance to the topic. Studies were excluded if they focused on aspects of child poverty in the industrialised world or when they did not mention gender. Others were removed due to duplication. The flow diagram below illustrates this stage of the search process and demonstrates where other stages contributed to the final result. Please note that the boxes in blue indicate the original review process, while the boxes in orange indicate the additional process of selection and review for this paper.

In addition to the main database search, hand searches were conducted focusing on Health Policy and Planning, Journal of Health, Population and Nutrition, Social Science and Medicine and Tropical Medicine and International Health from 1990 onwards. A number of articles were also identified and added from the authors’ own lists of relevant references and bibliographies. Each of these results was then reviewed and the abstract, or the paper itself, read in more depth in order to identify and categorise the studies thematically. The final review included 117 studies. This paper focuses on a subset of these studies to explore intra-household bargaining power and process in more depth.

Since the review included a focus on interventions addressing child health and nutrition, and many health interventions remain unpublished, it was deemed useful to access a range of non-academic, ‘grey’ literature in order to cover as wide a remit as possible. To this end, a snowball method was employed to request any relevant information from 42 experts in gender and health, representing expertise from Sub Saharan, Asian and Latin American contexts on infant and child health, women’s health and gender equity and health. In addition, a search was conducted of 20 websites representing donor agencies, non-government organisations and other online repositories of data on gender and health issues. However these searches yielded relatively few studies that could be used in the final report. In fact, while there was considerable empirical evidence on some aspects of gender and child health, there were only five evaluations of gender-relevant interventions found which demonstrated clear outcomes for child health and/or nutrition.

Figure 1 Stages of the search strategy

42 gender and

health experts contacted

Searches carried out on 20 key

websites

Hand searches

of four key journals

Electronic databases searched; 3,911 results identified; titles and abstracts scanned for relevance

845 articles saved to Endnote

Bibliography

325 articles identified and saved to

Endnote Bibliography

Studies excluded for duplication or where they did not fit criteria on gender or location. 117 articles selected for full review

Additional papers included following revision: 5

Papers selected for review on intra-household bargaining: 27

Papers included in final review: 32

**Findings**

Two aspects of intra-household bargaining power and process are examined here: 1) decision-making and access to and control over resources and 2) household structure and composition. The next sections explain in more depth these interlinked aspects of gendered intra-household bargaining.

*Decision-making and access to and control over resources*

A number of studies have identified links between women’s access to and control over financial assets and improved nutritional outcomes and health preventative behaviours for their children. Large-scale quantitative surveys conducted in Bangladesh and Brazil found that financial assets in the hands of mothers had beneficial outcomes for their children’s health and nutrition status. In Bangladesh, a higher proportion of pre-wedding assets held by mothers decreased the morbidity of preschool girl children (coefficient of illness days = -2.317; z-score = -2.08) (Hallman 2003). In Brazil, income accruing to women had a larger positive impact on child nutritional status (weight-for-height was 0.0329; height-for-age was 0.0255) in comparison with income accruing to men (weight-for-height was 0.0040; height-for-age was 0.0058) measured as total Two-Stage Least Squares ([Thomas 1997](#_ENREF_47)). A study undertaken in Benin combining quantitative and qualitative methods demonstrates one of the pathways in which income in the hands of women may provide better outcomes for children. A quantitative survey of 191 households found that women’s income was one of the key variables that predicted household use of a bed-net. Qualitative interviewing found that women who were able to earn income were more likely to purchase insecticide-treated bed-nets which would then be available for use by their children. On the other hand, bed-nets which had been purchased by the male heads of households were more likely to be used by men themselves as they perceived their own need as greater, given their perceived ‘breadwinning’ role in the household ([Rashed et al. 1999](#_ENREF_42)).

In addition to the significant role played by access to and control over resources within the household, other studies have drawn attention to its links with women’s decision-making power. Women’s decision-making power represents a different aspect of bargaining power since women’s access to resources does not always infer that they are able to make decisions over the distribution of those resources. The studies below quantitatively assess these aspects in conjunction through multivariate analyses. Table 1 provides a summary of the findings which highlight the interconnected nature of these two aspects of gendered intra-household bargaining.

The broadest study to examine women’s status for child nutrition looked at 36 countries in three regions (South Asia, Sub Saharan Africa and Latin America and the Caribbean) making use of data sets from nationally representative DHS household surveys (Smith et al. 2003). The study shows that overall women’s status has the strongest effect in South Asia, followed by Sub Saharan Africa and lastly, Latin America and the Caribbean (see Table 1).

In South Asia women’s relative decision-making power has a strong influence on long-term and short-term nutritional status. However, in Latin America and the Caribbean women’s relative decision-making power has a positive effect only on children’s short-term nutrition status and there is only a strong association in households where it is already very low. In all three regions women’s relative decision-making power has a stronger positive influence on child nutritional status in poorer households than in rich, suggesting efforts to improve child nutritional status through improving women’s status are likely to have the greatest impact when targeted at poor households.

Other studies using similar indices to measure women’s relative power within the household have found associations with child health and nutrition outcomes (see Table 1). For example, a study found that in rural households across India, reduced stunting was associated with increased maternal age and education and with residence in a female headed household (Gaiha & Kulkarni 2005).

TABLE 2: SUMMARY OF QUANTITATIVE STUDIES ON ASPECTS OF WOMEN’S BARGAINING POWER AND OUTCOMES FOR CHILD SURVIVAL, HEALTH AND NUTRITION

|  |  |  |  |
| --- | --- | --- | --- |
| **Study author(s) and title** | **Location** | **Source of data** | **Key findings and gender indicators significant for aspects of child survival, health and nutrition** |
| Smith, Ramakrishnan, Ndiaye, Haddad & Martorell (2003)  “The importance of women’s status for child nutrition in developing countries” | 36 countries across South Asia (97% of population covered), Latin America & the Caribbean (55%) & Sub Saharan Africa (61%) | National Demographic and Health Surveys conducted between 1990 and 1998  Cross-sectional study using data from a sample of 117,242 children across 36 countries | * The decision making power index was significantly correlated with child weight-for-age in South Asia; raising the decision making index by 10 points over its current mean would increase the region’s mean weight-for-age z-score (*WAz*) by 0.156. * Raising the decision making index in Sub Saharan Africa by 10 points over its current mean would raise the region’s mean *WAz* by 0.046 * Raising the decision making index in Latin America & the Caribbean would only have an effect on weight-for-height (*WHz*) up to a certain point (53 on the index) after which it would start to reduce. |
| Dancer & Rammohan (2009)  “Maternal autonomy and child nutrition: evidence from rural Nepal” | Nepal (rural households) | 2006 Nepal Demographic Health Survey  A cross-sectional study using data from 4,360 rural children aged 6-59 months for whom complete information is available with regard to health,  household demographics, maternal characteristics and other household characteristics. | * Maternal ability to have the final say in making daily household purchases significantly improves weight-for-height z-scores for boys and girls. * The size of the effect is particularly large for boys, where there is significant increase in weight-for-height z-scores by nearly 0.12 (Standard Error=0.063) * Similarly, if the mother has the final say on her own health, there is a significant increase in the height-for-age z-scores of children in the full sample (boys and girls together) by 0.14 (SE=0.045), and for boys by 0.18 (SE=0.065) |
| Gaiha & Kulkarni (2005)  “Anthropometric failure and persistence of poverty in rural India” | India (rural households) | A cross-sectional study based on a household survey conducted by the National Council of Applied Economic Research (NCAER) which included a total sample of 35,130 households spread over 1765 villages and 195 districts in 16 states. | * A higher proportion of children whose mothers had below primary education were severely stunted (43.98% versus 36.95% of mothers who had the highest level of education) * Children of women under 20 were most severely stunted (43.82% of the total). Data simulations showed that if women do not marry before they are 20 years old, stunting will reduce by 15.54% * There was a lower proportion of severely stunted children living in female-headed households (35.84% versus 42.80% in male-headed households). Simulations with the data showed that a complete switch of male-headed households to female-headed ones will reduce severe stunting by 27.02% |
| Shroff, Griffiths, Adair, Suchindran & Bentley (2009)  “Maternal autonomy is inversely related to child stunting in Andhra Pradesh, India” | Andhra Pradesh | National Family Health Survey (NFHS-2)  A cross-sectional study using demographic, health and anthropometric information for mothers and their oldest child <36 months (*n* = 821). | * Two gender measures were significantly associated with child stunting: *Permission to go to the market* and *freedom to use financial resource:* * Financial freedom: odds ratio = 0.731, 95% confidence interval = 0.546, 0.981 * Freedom of movement: odds ratio = 0.593, 95% confidence interval = 0.376, 0.933 |
| Fantahun, Berhane, Wall, Byass & Högberg (2006)  “Women’s involvement in household decision-making and strengthening social capital – crucial factors for child survival in Egypt” | Butajira, Egypt | Butajira Demographic Surveillance Site  Prospective case referent (control) design with a total of 209 under-five year old deaths occurring in an 18 month period plus 627 referents matched for age sex and community of residence. This study design allowed researchers to follow cases over time. | * Child mortality was around three times higher in families where women had less decision-making power compared to those where women had greater decision making power. |
| Hossain, Phillips & Pence (2006)  “The effect of women’s status on infant and child mortality in four rural areas of Bangladesh” | Bangladesh (six sub-districts): Sirajgonj, Abhoynagar, Gopalpur, Fultala, Bagherpara and Keshobpur | The analysis uses data from the Sample Registration System (SRS) which has generated a series of cross-sectional surveys since 1982. The study draws on data from children born in six rural *thanas* (sub-districts) between 1988 and 1993 (n=7534). | * Autonomy is significantly negatively associated with post-neonatal mortality (Rate Ratio = 0.88, chi-squared *p<* 0.05) * Authority is significantly negatively associated with post-neonatal mortality (RR = 0.89, p<0.10) and child mortality (RR = 0.84, p<0.05) * Empowering women with both autonomy and authority in the household would be expected to reduce post-neonatal mortality by one-third [Percentage reduction = 36.2%; 95% CI = (18.4, 50.1)] and child mortality by nearly half [Percentage reduction = 44.6%; 95% CI = (24.6, 59.4)] |

In addition, studies found that direct indices of ‘women’s autonomy’ within their households that combine indicators of women’s greater relative decision-making power and access to resources (e.g. whether women are able to make decisions to travel outside the home to pay visits to health institutions, and whether they are able to make decisions about household purchases) are positively associated with reduced levels of stunting among children younger than five ([Dancer & Rammohan 2009](#_ENREF_16); [Shroff et al. 2009](#_ENREF_44)) and improved child survival ([Fantahun et al. 2007](#_ENREF_20); [Hossain, Phillips & Pence 2007](#_ENREF_30)) (see Table 1).

Overall, these studies underline that women’s bargaining power is an important factor in exploring child survival, health and nutrition but the extent to which improvements in women’s status are connected to improvements in young child health and nutrition status may differ according to socio-cultural context.

The relationship between decision-making power and access to and control over resources in intra-household bargaining processes has also been explored qualitatively in relation to a number of aspects of child health and nutrition including treatment -seeking behaviour (particularly for children with malaria) and in relation to infant-feeding practices.

Several studies have investigated the relationship between norms of decision-making and access to and control over resources in Ghana. Although in some cases women proceeded to seek treatment where they had sufficient funds, studies found that under certain circumstances mothers generally consulted the male head of household about treating a child: for example, when he was expected to pay for treatment, when the illness was perceived as serious and/or when the mother wanted to take the child outside the community for treatment ([Asenso-Okyere et al. 1997](#_ENREF_5); [Livingstone 1995](#_ENREF_33)). In a qualitative study of intra-household bargaining over treatment-seeking in the Volta Region of Ghana, Tolhurst et al. (2008) found that treatment-seeking for children with fever was influenced by the relationship between mothers’ access to and control over resources to pay for care, norms of responsibility for payment, and norms of decision-making power.

These processes have been explored in other contexts. A study using quantitative and qualitative methods in Kenya identified the absence of a mothers’ partner as a reason for delay in treatment-seeking for children with malaria in Kenya but did not clarify whether his presence was needed to enable access to resources or decision-making ([Mwenesi, Harpham & Snow 1995](#_ENREF_37)). In Yemen, al-Taiar et al. (2009) conducted a survey and follow-up focus group discussions to explore knowledge and practices for preventing malaria. They found that women were more financially constrained than men which produced delays in their treatment-seeking for sick children. In focus groups women often described ‘struggling’ with their husbands over obtaining financial support to take a child to the hospital ([al-Taiar et al. 2009](#_ENREF_2)).

Beyond a malaria focus, a study on the socio-economic and cultural factors underlying malnutrition among children in Tanzania found that while there was no direct quantitative link between women’s bargaining power and child malnutrition, qualitative evidence suggested that the subordinate status of certain mothers, combined with a range of other factors such as sex of child, spacing and sibling order, acted as a constraint on child care practices ([Howard 1994](#_ENREF_31)). In addition, a multi-country qualitative study (Cambodia, Burkina Faso, Cameroon) revealed a complex relationship between women’s access to and control over resources and their wider decision-making power in relation to infant feeding ([Desclaux & Alfieri 2009](#_ENREF_17)). In all sites, HIV positive women’s ability to choose an appropriate infant-feeding option (either exclusive breast or formula feeding) was positively influenced by their degree of autonomy (influenced by their economic or educational capital or their social status), the support of husbands (especially when HIV status has been disclosed), or inclusion in a research or NGO project (ibid.).

Senior women are often involved in decision-making around infant-feeding practices. A study accompanying an intervention carried out in Senegal found that the inclusion of grandmothers in participatory learning activities on child nutrition and healthcare led to significant gains in women’s nutrition practices during pregnancy and in feeding practices of newborns. Through qualitative interviewing of the participants it was found that these improvements were linked to the positive roles played by grandmothers in encouraging women to eat ‘special’ foods, to decrease their work-load and to exclusively breastfeed for the first five months ([Aubel, Touré & Diagne 2004](#_ENREF_6)).

Another aspect of intra-household bargaining which emerged from the literature review reflects on the role of household headship, structure and composition in mediating bargaining power and process in mediating child health and nutrition outcomes. This is discussed below.

*Household headship, structure and composition and intra-household bargaining*

Household headship influences access to and allocation of resources for child health. It has been hypothesised that in some contexts children may benefit more from expenditure in female rather than male headed households, since there is evidence that women channel more resources into health and nutrition for their dependants ([Bruce 1989](#_ENREF_8)).

On the other hand, although women may allocate a greater proportion of the income they control to children, the benefits of this for child health outcomes may be reduced by women’s access to relatively lower levels of income. For example in a study of parental characteristics and child nutrition in male-headed households in Western Kenya, mothers’ income was only weakly significant in influencing children’s height for age z-scores as compared to fathers’ income (the standardised coefficient for mothers’ income as a determinant of stunting was 0.0544, *t*-value = 1.654, significant at the 90% level). While mothers spent up to 52% of their income on food commodities as opposed to fathers (who spent only 38% of their income), in absolute monetary terms expenditure on food by fathers was higher ([Marinda 2006](#_ENREF_34)). Nevertheless evidence from Jamaica showed that despite female-headed households spending a smaller proportion of their budgets on health services, their children had lower morbidity rates than their counterparts in male-headed households suggesting differences in nurturing and health production. This was in part supported by further analysis of health care behaviour which found that older children in female-headed households were more likely to be sent for preventative health care check-ups ([Handa 1996](#_ENREF_27)).

Furthermore, there are different types of female-headed households. For example, women may become household heads for specific periods of time during which their husbands migrate for work. This kind of female headship is often referred to as ‘de facto’ since it suggests that women are not the official, or legal, head of the household, but would possibly experience some level of autonomy in decision-making during periods in which their husbands were absent. Alternatively, women may be single mothers, widowed or divorced and therefore have legal, or official status as the household head (often referred to as ‘de jure’ female heads of household). *De jure* female heads of household are likely to bear the sole responsibility for income-earning, which may undermine the possible benefits they and their children derive from experiencing higher levels of autonomy. While it cannot be assumed that *de facto* female heads always receive remittances from absent husbands, the possibility that this might occur suggests that they might benefit both from greater levels of income (in comparison with *de jure* household heads) and greater autonomy (in comparison with women and children in male-headed households) ([Onyango, Tucker & Eisemon 1994](#_ENREF_39)).

It has also been argued that regardless of household headship, men’s contributions to the household remain one of the most significant factors in determining child health and nutrition, as a non-contributing father in any household type represents one of the severest risks to children and their mothers ([Bruce & Lloyd 1997](#_ENREF_9)). This hypothesis is supported by research from Mozambique examining the effect of intra-household cash income control and decision-making patterns on child growth ([Pfeiffer, Gloyd & Ramirez Li 2001](#_ENREF_41)). The study found that male cash income was strongly associated with better nutrition for children through increasing access to expensive proteins such as meat, fish and poultry. However, the hypothesis that mothers’ higher incomes increased their decision-making power around expenditures and led to improved nutrition for children was not supported by these data (ibid.).

The relationship of household headship with access to and control over resources and decision-making norms may also affect preventive health practices in relation to young children. For example, an ethnographic study in Southern Tanzania found that women and children are caught in a ‘catch-22’ where female-headed households lack the income to buy bed-nets (and so may benefit from income-making opportunities) while on the other hand mothers in male-headed households lack authority to control the use of bed-nets, even where they have contributed to the household purse through their own earnings ([Minja et al. 2001](#_ENREF_36)). This demonstrates that women’s earning power does not always translate to decision-making power or access to household resources and should deter researchers from making assumptions in relation to the drawbacks or benefits of specific types of household for young children.

Women’s ability to access resources and allocate them successfully to their children is also affected by other aspects of intra-household dynamics, such as household structure and composition. Relationships between different members of the household differ across cultural contexts, especially when taking into account household headship and hierarchies of authority and seniority. In some contexts household hierarchies may place a mother-in-law or grandmother in a position of authority over a younger female.

Hierarchical household structures, where mothers-in-law are in a position of authority over mothers, have been associated with a detrimental effect on their grandchildren’s health and nutrition ([Castle 1993](#_ENREF_12); [Doan & Bisharat 1990](#_ENREF_18); [Griffiths, Matthews & Hinde 2002](#_ENREF_24); [Simon, Adams & Madhavan 2002](#_ENREF_45)). However, researchers have also found that in some contexts senior females such as grandmothers can prove an important resource for improving child health and care practices. For example, a qualitative study in Lesotho found that grandmothers’ advice on infant feeding during episodes of diarrhoea was ahead of outdated “health policy” being encouraged by local nurses. Based on this, the authors argue that the power relations between senior and junior women can work as a potentially positive resource for young mothers ([Almroth, Mohale & Latham 1997](#_ENREF_3)). In contrast, however, Castle found that children of mothers living in laterally-structured and nuclear households with no mother-in-law had better nutritional outcomes than children of women in hierarchically-structured households with a mother-in-law and other daughters-in-law ([Castle 1993](#_ENREF_12)). Given that there are also detrimental aspects of senior women’s influence, formative research needs to take into account the role of senior women as important influences when planning information, education and communication (IEC) interventions and health promotion activities.

Finally, an additional aspect of household structure which can produce struggles over authority between women is that of polygynous households, where husbands share residence or resources with more than one wife. There is no conclusive evidence to suggest that such households are detrimental to child health (Engle, Castle & Menon 1996). However, studies drawing on quantitative and qualitative evidence have found that in some contexts where polygyny is practiced children of ‘newer’ wives may benefit from receiving a greater share of resources than children of ‘older’ wives ([Hampshire et al. 2009](#_ENREF_26); [Oni 1996](#_ENREF_38)).

The sections above demonstrate the multiple elements involved in intra-household bargaining power and process in relation to child health and nutrition outcomes. The interwoven nature of these elements reflects the fact that bargaining relies on exploring who controls and allocates resources as well as who has the power to make decisions within the household in different contexts. This in turn is influenced by multiple factors including women’s status (in society and within the home) and household headship, structure and composition.

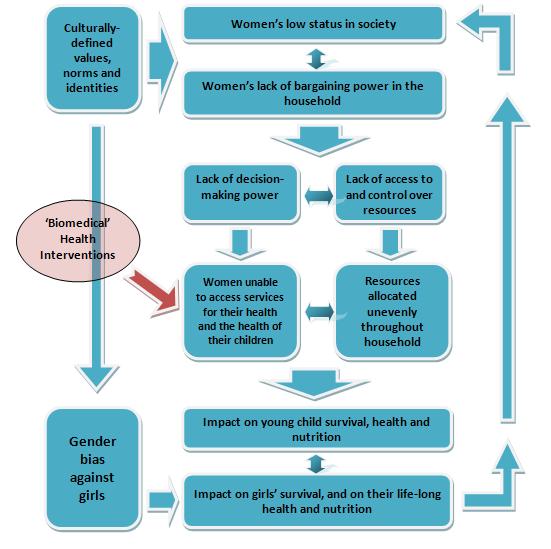
**Discussion**

Studies on intra-household bargaining power and process reveal a number of entry-points to the ways in which gender as a social determinant may significantly influence child health and nutrition outcomes. This discussion will focus on key themes emerging from the findings and will relate these to the challenge of implementing and evaluating effective interventions to address gendered dimensions of child health and nutrition.

The previous sections outlined the role that intra-household bargaining power and process plays in mediating child health and nutrition outcomes. However, there are few published gender-relevant interventions to address child health and nutrition. These are mainly focused on areas such as: improving service delivery through increasing home visits (Faruqee & Johnson 1982); increasing community participation through mobilisation and empowerment activities (Rath et al 2010) and through involving senior women (Aubel, Touré & Diagne 2004); and finally, addressing social protection and financial inclusion through micro-credit ([Hamad, Fernald & Karlan 2011](#_ENREF_25)) and cash transfer programmes (Adato & Bassett 2009). This could be related to the fact that gender-sensitive interventions which might plausibly impact on child health and nutrition (through pathways described above) may have been designed with different health end-points in mind and not designed or evaluated for child health and nutrition outcomes.

For example, there are a range of gender-sensitive interventions in other areas of health, such as maternal and reproductive and sexual health and HIV, which represent potential opportunities for building synergy and addressing gender dimensions of child health and nutrition in their implementation and evaluation. There are several reasons why building these linkages to existing gender-sensitive programmes may create synergistic benefits. Our findings highlight the following: first, understanding and addressing gendered intra-household bargaining as a determinant of child health requires a comprehensive approach to gender throughout the life-cycle; second, adopting an intersectional perspective to gender and child health and nutrition is essential to developing appropriate interventions in this area. The diagram below illustrates the cyclical nature of gendered bargaining within the household and will be referenced in the next sections. The diagram draws on the findings from this review, combining these with evidence from contexts where gender bias against girls contributes to transferring the effect of gender inequalities to the next generation.

Figure 2 Diagram illustrating the cyclical effects of women's lack of bargaining power



*Gendered intra-household bargaining as a complex determinant of child health: taking a life cycle approach*

There are a number of lessons that can be drawn from the studies of intra-household bargaining. These demonstrate the importance of women’s financial and decision-making autonomy to improve child health and nutrition outcomes. However they also show that treatment seeking for child illness often relies on decision-making processes which are the culmination of negotiation between different household members, in many cases mothers and fathers, but also, older and younger members (such as mothers and their mothers-in-law). A lifecycle approach stresses that gender interacts with other social determinants such as age and socio-economic status to determine outcomes pre-conception, during pregnancy, at the birth and during the first days, weeks, months and years of life ([Fikree 2004](#_ENREF_21)). However as we have seen, emphasis has been placed on gender as a determinant of the health of adults and young people (for example, in terms of the focus on sexual and reproductive health) or in certain contexts, for example in South Asian countries, through examining gender bias which affects girls’ survival rates. The hidden impacts of gender on children’s health and nutrition require exploration beneath the surface of gender inequalities in order to understand the complex and context-specific dynamics of intra-household bargaining. This presents particular challenges for developing interventions, particularly since the evidence on intra-household bargaining illustrates the interactions between structure (in terms of limitations on women’s power) and agency (the ways in which both junior and senior women act to use their limited power). There is scope to invest in researching the impact on child health outcomes of established intervention strategies in reproductive and sexual health and gender-based violence. For example, the IMAGE project in South Africa evaluated the impact of a gender-sensitive intervention on both gender-based violence and HIV (Kim et al 2007). The project combined access to credit for women with participatory methods designed to engage the community in challenging and addressing behaviours and attitudes leading to HIV and gender-based violence. The randomised controlled trial found a significant reduction in the risk of physical or sexual violence by an intimate partner. These reductions were linked to improvements in nine empowerment indicators which demonstrated that women had become more able to challenge violent behaviours, leave abusive relationships and raise awareness about violence within their communities (Kim et al., 2007). Given evidence that gender-based violence experienced by mothers is known to affect child health and nutrition outcomes (Yount, DiGirolamo & Ramakrishnan 2011) this kind of intervention provides useful learning that could be translated to the context of child health and nutrition.

*An intersectional approach to gender and child health and nutrition*

While the concept of intra-household bargaining can enable a broader vision of the cyclical effects of gender influences through time, an intersectional approach to gender and child health allows for the multiplicity of social determinants that operate at any given point in time to be taken into account. While research on health status and health systems often focuses on social determinants such as gender as isolated factors, there is a need to investigate and understand how different axes of power intersect to create multiple identities (Tolhurst et al., 2011; Connell 2011). The evidence reviewed here supports this, particularly in relation to intersections of age and gender. For example, while women heads of household are in a better position to make decisions autonomously from the fathers of their children that can benefit child health and nutrition status, their socioeconomic position may be more fragile than that of women who have husbands and partners within the household. The studies reviewed also highlight the important role of senior women as household heads whose authority may help and hinder younger women’s negotiations over decisions and resources that affect their children. It is important that the roles played by household members other than the mother are taken into account in interventions, especially given the opportunities for improving child health outcomes by working with alternative household decision-makers (Aubel 2011). However, this can produce tensions between shorter term approaches which focus narrowly on child health and nutrition outcomes and longer term approaches to challenge gendered power relations across the lifecycle. Improving the life-chances of girls and boys in the long-term requires sustainable interventions to address gender relations throughout childhood, adolescence and adulthood.

*Beyond the surface: developing gender-sensitive approaches to child health and nutrition*

We have argued the need for greater links and synergies to be developed between interventions to address gender relations more broadly and child health and nutrition programmes. The cyclical nature of gender issues such as intra-household bargaining, as illustrated by Figure 2, suggests the need to develop sustainable, long-term approaches to child health and nutrition.

In their paper on intra-household bargaining and treatment-seeking for childhood malaria, Tolhurst et al. (2008) present their findings using a framework which distinguishes between ‘biomedical’ and ‘agenda setting’ approaches to gender in health. A ‘biomedical’ approach (also referred to as ‘integrationist’ by the authors) aims to reduce gender-related disadvantages in access to health services, quality of services, or health outcomes. Figure 2 illustrates this through a red arrow pointing to the moment in the cycle that refers to women’s low access to health services for their children. The authors note that this approach dominates among mainstream international health discourse. In contrast, however, they describe an ‘agenda-setting’ approach to gender and health as one which seeks instead to refocus the provision of health-related services and interventions, to ensure they promote ‘gender transformatory’ goals, by addressing power relations and promoting women’s rights and interests (Tolhurst et al., 2008).

From the perspective of ‘biomedical’ interventions, the influence of women’s lower status on the outcomes of decision-making processes within intra-household bargaining suggests a number of possible actions including: reducing the costs of using health services to mothers and their children and targeting fathers and other senior members such as grandmothers and mothers-in-law with information, education and communication about child health and nutrition. While these interventions are useful in the short and medium term, from a ‘gender transformatory’ perspective they may serve to reinforce the structures that sustain gendered power relations within households through targeting resources of men and other senior figures. As discussed above, interventions with narrowly focused aims should be complemented by more ‘gender transformatory’ initiatives pioneered in other areas of health. This allows us to draw on learning from these areas. For example, a review by the Interagency Gender Working Group found evidence that introducing gender into programme design had positive outcomes for reproductive health interventions ([Interagency Gender Working Group 2005](#_ENREF_32)). Similarly, a review of programmes designed to engage men and boys in improving various health outcomes found that programmes rated as ‘gender-transformative’ were more successful ([World Health Organization 2007](#_ENREF_48)).

Efforts to enable women to control a greater share of resources and make decisions about their own and their children’s well being are central to such gender transformative approaches. Both cash-transfer programmes and micro-credit schemes have shown some potential for achieving these outcomes, particularly when combined with awareness-raising processes (see for example Kim et al. 2007; Adato & Bassett 2009). However, a deep understanding of the complexity of gender relations in any given context is critical, since there is also evidence of the potential for unintended consequences of interventions. For example, evaluations of microcredit schemes in India found that where these were more successful (in terms of repayment), male earners actually shifted financial responsibilities for the household onto women (who generally earn less and work less regularly) while also taking control of the extra income ([Batliwala & Pittman 2010](#_ENREF_7)). Financial initiatives such as cash transfer programmes must learn from their predecessors if they are to successfully improve health outcomes without undermining gender equity goals. Enabling meaningful participation of women and men from target communities is critical to ensuring socio-cultural and gendered norms are appropriately considered. A cluster-randomised trial of a participatory learning and action cycle which focused on mobilising women’s groups in Jharkhand and Odisha, eastern India led to a 45% reduction in neonatal mortality in the last two years of the intervention, largely due to improvements in safe practices for home deliveries. The participatory design was found to be critical to this success (Rath et al. 2010). A careful consideration of context coupled with an emphasis on engaging communities as far as possible through participation are key ingredients for developing gender-aware interventions to address child health and nutrition.

**Conclusion**

This review of the literature on intra-household bargaining power and process demonstrates the significance of gender as a social determinant of child health and nutrition across a range of contexts. Overall, the studies reviewed highlight that intra-household bargaining power operates through inter-linked mechanisms shaping how resources are channelled to children in terms of nutrition and health inputs (i.e. feeding practices, prenatal and birthing care, treatment-seeking for child illness and immunisation). We focused on the mechanisms of decision-making power and access to and control over resources and household structure and composition to elucidate the significance of women’s position in the household vis-à-vis men and other senior women. Despite the body of evidence supporting the significance of this aspect of intra-household relations for child health, few interventions were found that focus on addressing these issues specifically.

Efforts to address gender in health and nutrition programming need to be thoroughly documented and widely shared to promote further learning and action. Stronger links must be developed between initiatives to address gender equity issues such as gender-based violence and empowerment, programmes promoting maternal, reproductive and sexual health and interventions to address child health and nutrition outcomes. In addition there is scope to re-orient and re-design traditional early child health activities and interventions to integrate gender-sensitive approaches. Gender constitutes a key social determinant of child health and nutrition and must be considered an integral component of the broader commitment of the international health community to ensuring equity in child health and nutrition. Child health and nutrition interventions will be more effective, equitable and sustainable if they are designed based on gender-sensitive information and continually evaluated from a gender perspective.

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