

Gender Influences on Child Survival, Health and Nutrition: *A Narrative Review*



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EXECUTIVE SUMMARY

Context to the Literature Review and Guidance on gender and child health

There is increasing recognition in the field of international health and nutrition that gender inequities and dynamics are a major social determinant of health and nutrition outcomes. However, reviews of evidence to date have tended to concentrate on comparisons of health and nutrition outcomes, healthcare utilisation or coverage of services/programmes between boys and girls or women and men. This review of the literature and accompanying guidance document respond to a range of questions exploring more broadly the ways in which gender influences household dynamics in relation to aspects of young child health and nutrition.

The development of the literature review (“Gender influences on child survival, health and nutrition: a narrative review”) and accompanying guidance document (“Guidance on methodologies for researching gender influences on child survival, health and nutrition”) follows the publication of UNICEF’s operational guidance on gender analysis and programming on the Focus Area of Young Child Survival and Development (published in 2011). During the development of the operational guidance, it emerged that there is limited data on the impact of gender on child survival outcomes and that more tools would be needed to conduct quality gender analyses. Thus, the literature review was commissioned in order to gain a more systematic overview of the available research on gender influences on child survival, health and nutrition, with the express aim of identifying the relevant methodologies and tools for undertaking such research. The guidance document provides a step-by-step guide to these methodologies including tools and concrete examples to help UNICEF country offices initiate and support formative research on gender and aspects of child health and nutrition. The literature review and guidance documents drew on findings from academic and ‘grey’ literature, based on an extensive search using the following strategies: a systematic search of 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); a ‘grey’ literature search of key health and development websites; contact with 42 leading experts in gender and child health; and hand-searches of four leading international health journals (Health Policy and Planning, Journal of Health, Population and Nutrition, Social Science and Medicine and Tropical Medicine and International Health).

While the review itself outlines the considerable range and breadth of research findings on different dimensions of gender, the accompanying guidance document focuses on the methods, tools and data sources used by the studies to usefully investigate these issues.

Gender influences on child survival, health and nutrition: a narrative review:

Section 1.1 of the literature review draws on studies investigating women’s status and intra-household bargaining in relation to child survival, health and nutrition. Overall the studies reviewed found that women’s bargaining power is influential in two main areas. Firstly the extent to which women are able to influence decision-making within the household influences how resources are channelled to children both in terms of nutrition and health inputs (i.e. feeding practices, prenatal and birthing care, treatment-seeking for child illness and immunisation). Secondly, women’s ability to access and control the use of resources for their own health and well-being impacts significantly on their children’s survival, health and nutrition.

Section 1.2 of the review focuses on some of the ways in which divisions of labour between women and men influence practices impacting on child survival, health and nutrition. Overall, the studies included in

this section demonstrated that women's multiple responsibilities (which often encompass domestic tasks, child care and paid labour) present a heavy burden on women which has potentially negative impacts for child health and nutrition outcomes. Men, on the other hand, are often not expected to bear responsibility for domestic tasks or child care, which restricts the care options for children whose mothers are over-loaded.

Section 1.3 of the review focuses on the influence of gender norms, values and identities in relation to child survival, health and nutrition. Overall, it was found that socio-cultural values which perpetuate certain expectations about women's and men's capacities, characteristics and social behaviour underpin many of the imbalances between women and men viewed in the previous sections. These have serious consequences for child survival, health and nutrition, especially in contexts where gender bias against girls exists. There are also serious consequences for children exposed to domestic violence, a phenomenon which reflects gender discrimination at its most extreme.

Section 2 of the review focuses on evaluations of interventions which have used an aspect of gender-awareness in their intervention design with the aim of addressing issues around child health and nutrition. After an extensive search only five examples of relevant evaluations were identified. This is an area where further work is needed to design sufficiently sensitive strategies to evaluate gender-sensitive interventions. It is critical to explore the gender dynamics and processes leading to particular health service user outcomes in order to understand how gender roles and relations interact with interventions to influence child health and nutrition outcomes and service utilisation outcomes.

Guidance on methodologies for researching gender influences on child survival, health and nutrition:

The guidance on methodologies for researching gender influences on child survival, health and nutrition draws on examples from the review and from other sources, to identify key aspects in conducting gender-sensitive research. Although the methods outlined are largely the same as those used for researching other topics, the guidance highlights ways in which these methods and tools can be used to elicit gender-sensitive information on child survival health and nutrition.

At the heart of gender-sensitive methods, is the need to reflect on the potential for any research topic, question, method or tool to elicit information on the different ways in which girls, women, boys and men experience their status, roles, responsibilities, decision-making power and access to and control over resources. The guidance highlights the importance of incorporating these considerations at every stage of the study design - as well as other cross-cutting factors such as age and socioeconomic status, in order to successfully conduct gender-sensitive research. The guidance provides a step-by-step guide to methods and tools that can be used to explore and analyse how gender shapes child health and nutrition and also to design and evaluate responsive interventions from a gender perspective (including quantitative questionnaires, gender-sensitive indicators, qualitative interviewing techniques, Participatory Rapid Appraisal methods, among others). However it also highlights that the choice of method to use for a particular study will depend on a number of factors including: the setting, research question and topic, conclusions sought and logistical issues.

Conclusions from the Literature Review and Guidance on gender and child health

The literature review and guidance together highlight the urgent need for further use of gender-sensitive approaches to research that addresses child health and nutrition across a range of contexts. This is important because of the critical role that such contexts play in shaping the impact of gender dynamics. Efforts to address gender in health and nutrition programming need to be widely shared to promote further learning and action. The consideration of gender is an integral component of UNICEF's broader commitment 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

There is increasing recognition in international health and nutrition that gender inequities and dynamics are a major social determinant of health and nutrition outcomes¹. However, reviews of evidence to date have tended to concentrate on comparisons of the health and nutrition outcomes, healthcare utilisation or coverage of services/programmes between boys and girls or women and men. This literature review and accompanying guidance document respond to a range of questions exploring how gender influences household dynamics in relation to aspects of young child health and nutrition. We adopted a narrative approach to undertake the review of studies, which involves synthesising primary studies in order to explore heterogeneity descriptively rather than statistically². The review draws on findings from academic and 'grey' literature, based on an extensive search focusing on the following research questions:

1. How do women's status, agency and access to resources affect the health and nutrition of young children?
2. How do gender divisions of labour affect the health and nutrition of young children?
3. How do men's roles and masculinities affect the health and nutrition of young children?
4. Which methodologies and data sources have been used to assess the impact of gender on the health and nutrition of young children and what are their strengths and weaknesses?
5. Which approaches to addressing the impact of gender inequalities, roles and relations on young child survival have been assessed and with what results?

The literature review focuses on questions 1, 2, 3 and 5 while the guidance document accompanying the review addresses question 4. The literature review has been subdivided into two main sections – the first on research on gender and child survival, health and nutrition, the second on evaluations of gender-sensitive interventions. The search for materials brought up a larger number of studies than expected exploring aspects of gender and young child survival, health and nutrition.

One of the main challenges in organising this number of studies (which were quite diverse in their approaches) was in how to categorise different dimensions, or aspects, of gender found in the literature. We decided to adapt and use the gender analysis framework developed by gender and health experts

¹ Commission on the Social Determinants of Health (2008) *Closing the gap in a generation: Health equity through action on the social determinants of health, final report of the commission on social determinants of health*, WHO.

² For more information on this approach in reviewing literature, see Petticrew M, & Roberts H (2006) *Systematic Reviews in the Social Sciences: A practical guide*, Oxford: Blackwell Publishing.

from the Liverpool School of Tropical Medicine in the late 1990s³. Using this gender analysis framework allowed us to effectively explore and highlight the complexities of the various issues arising from the available evidence.

The framework draws attention to five elements that should be taken into account in research exploring aspects of gender and health:

- the impact of environment⁴;
- women's bargaining positions and their access to and control over resources;
- activities engaged in by women and men;
- underlying gender norms of their health and the health of different household members.

We adapted these categories based on the main aspects of gender identified in the research questions and arising from the studies themselves and eventually organised the studies according to three main themes:

- women's status and bargaining power and process (combining elements of the first two categories)
- gender divisions of labour (which includes the element of women's and men's 'activities')
- gender norms, values and identities (which broadens the LSTM category on gender norms)

While the three themes identified above are linked, the range of topics and research questions represented across the studies offered opportunities to unpack different aspects of these themes. For example, under the first theme, when reviewing the literature on women's status and intra-household bargaining we explore how women's decision-making power and their access to and control over resources are both discrete and inter-dependent aspects of bargaining. Under this first theme we also address aspects of household headship, structure and composition in relation to bargaining processes.

The second theme explores the ways in which women's and men's work roles and responsibilities impact on child health and nutrition drawing on literature about women's time pressures and the trade-off for women between child care and the necessity of earning income for the household. This section also briefly explores the issue of paternal roles and the need for a more equitable division of reproductive labour, in light of the potential gains for child health and nutrition, as well as addressing the issue of women's heavy work burden.

The third theme addresses gender norms, values and identities that underpin gender inequalities and that are linked to a range of practices, behaviours and attitudes that, at their most extreme, may produce gender bias against female children gender-based violence.

³ The Gender and Health group at LSTM developed a set of guidelines, within which the gender analysis framework is outlined, for more information, see: <http://www.lstmliverpool.ac.uk/research/academic-groups/international-health/gender-and-health-group/guidelines>

⁴ In the framework 'environment' refers to both the geographical and social context of people's lives.

As mentioned above in section two of this document we explore interventions that have addressed aspects of child health and nutrition from a gender perspective. Despite having searched a number of online information repositories and websites, as well contacting over 40 gender and health experts (see methods section below for more details) we were unable to find many evaluations of interventions that have adopted a gender perspective to address issues around child health and nutrition. Section two of the review is therefore much briefer than section one.

Accompanying the Literature Review (sections 1 and 2) we have produced a Guidance document which explores the methods, tools and data sources for commissioning research on aspects of gender and child survival. The Guidance first presents the key messages from the literature review, then in subsequent sections identifies key methods, tools and data sources for researching gender dimension of child survival, health and nutrition.

Glossary of gender terms:

Women's status refers to the different value assigned to women and men in a socio-cultural context and reflects their position in the household and wider society. Women's status mediates their access to opportunities and resources in those contexts as well as influences their ability to act autonomously.

Women's autonomy is related to women's status and refers to the relative decision-making power women have within the household or within their wider society.

Gender refers to the socially and culturally prescribed roles and values that are ascribed to girls and boys, women and men in different societies and contexts. Researchers generally refer to biological sex as fixed while gender roles and relations are changeable. It is worth noting however that recent research has pointed to the ways in which biological sex is also changeable and is also subject to social and cultural expectations and therefore also open to change and transformation.

Gender roles and relations refer to those ways in which women and men are taught to behave in specific ways related to their biological sex, including in terms of how they relate to one another. Gender roles and relations are embedded in education, political and economic systems and religion in any given context.

Gender norms, identities and values refer to those aspects underlying gender roles and relations. Gender norms, identities and values in any given context define the understanding and expectations of women's and men's capacities, characteristics and social behaviour within that context.

Gender division of labour refers to the different work assigned to women and men according to the social and cultural context in which they are embedded.

Intra-household bargaining refers to the ways in which women and men participate in and have control over decisions about household resources. Researchers have pointed to the importance of taking into account factors affecting the relative 'bargaining position' of different household members, including women and men with different statuses within the household.

Gender equality refers to the way in which women and men are treated according to their biological sex and the resources and opportunities to which they have access in their everyday lives. Women's activists have sought to reduce discrimination that leads to inequalities between women and men and which create unfair imbalances in women's and girls (as opposed to men's and boys') access to resources, benefits, services and decision-making power.

Gender equity makes a distinction between the need for 'sameness' and 'fairness' in the distribution of those resources mentioned above. Women and men and girls and boys may require equal access to health for example, but have different health issues that require different resources. For example, health policies and programmes must take into account men's and women's different realities in terms of women's reproductive roles (for example in legislating for maternity and paternity leave).

Gender analysis refers to the critical examination or evaluation of an issue, problem or situation in order to understand the ways in which gender roles and relations contribute to specific outcomes. Gender analysis is undertaken both in order to produce a detailed picture of the gender aspects and dimensions of a given issue and to plan for potential challenges which may influence the success of a project.

Gender sensitivity/awareness refers to the ways in which a policy, research project or intervention has been designed to be responsive to/aware of the different gender roles and relations which mark the behaviour and attitudes of participants and which may influence its outcomes.

*Adapted from Reeves & Baden (2000) Gender and Development: Concepts and Definitions.
Bridge Report No. 55.*

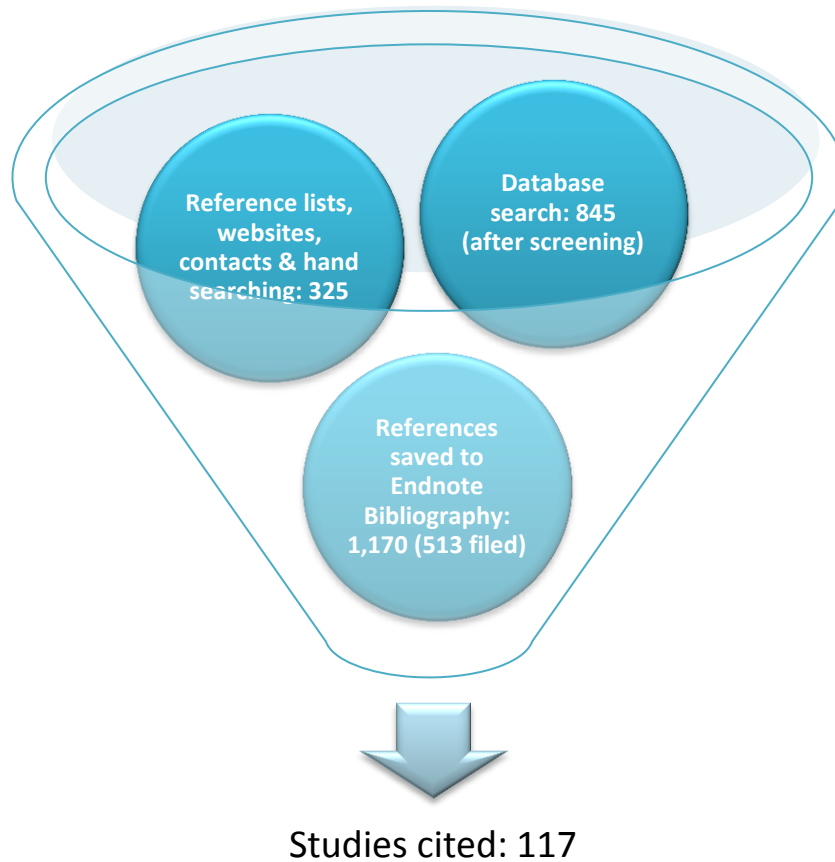
METHODS

We conducted a search 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). After some initial searches we honed the search terms and based the search on the following terms (see below). We tested the terms in order to identify the abbreviations that yielded the broadest results.

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

By combining the first two layers, the search yielded 176,649 results. Focusing on the global South, we refined the search by employing the third 'location' layer, which yielded 12,943 results. Finally we narrowed the list of results using the inclusion criteria (literature from 1970 onwards) and to those which included the search terms in the abstract or the subject terms/keywords since these results were more likely to have most relevance for the literature review. This left a list of 3,911 results to be scanned. We scanned these results and briefly assessed them to judge their usefulness for the topic in hand. 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 diagram below shows the number of studies which were included in the Endnote Library used as the bibliography for this project. The total number of references in the Endnote Library are 1,330, however these also include studies broadly relevant to gender and health.

FIGURE 1: DIAGRAM DETAILING ELEMENTS OF THE SEARCH STRATEGY USED TO GATHER DATA FOR THE LITERATURE REVIEW



In addition 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. These journals were accessed between May 12th and June 21st, 2011. Due to time constraints we decided to scan titles included in journal issues accessible online. Social Science and Medicine has a very large number of issues per volume. In the time we had available it was only possible to scan titles going back to 1990.

A number of articles were also identified and added to the Endnote Library 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.

In order to access non-academic, 'grey' literature for use in the review we used a snowball method to contact 42 experts in gender and health from across the globe (see Annex II for a list of names and dates contacted). We also searched more than 20 websites representing donor agencies, non-government

organisations and other online repositories of data on gender and health issues (see Annex III for a list of websites and date accessed).

These searches occurred in parallel continued until late in the writing process in order to ensure all avenues were pursued. As the diagram shows, a smaller number of studies were filed in the Endnote bibliography under specific categories such as 'men and child health' or 'women's status and child health' which aided the reviewing process. The number of studies cited represents the final total of studies included in the final draft of the review.

1 REVIEW OF STUDIES EXPLORING GENDER INFLUENCES ON CHILD SURVIVAL, HEALTH AND NUTRITION

1.1 WOMEN'S STATUS AND INTRA-HOUSEHOLD BARGAINING POWER AND PROCESS.

This section explores one of the main ways in which women's status (see box 1 below) impacts on child health and nutrition outcomes within the household through women's bargaining power relative to other members of the household.

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. As this is a well established literature, we have drawn on some key reviews and quantitative studies in order to highlight its relevance to child survival (Caldwell & Caldwell 1991) (Smith & Haddad 2000). In brief, the mechanisms hypothesised to explain the effect of women's status on child survival include **better literacy, better adherence to health services, more autonomy, more bargaining power, more access and control over resources**. Among the dimensions of women's status explored, maternal education is one of the best-researched mechanisms through which improvements in women's status (i.e. through better education for women) leads to gains in child health and nutrition. This is explored in more depth next.

Box 1: What is women's status?

Women's 'status' refers to the position women hold vis-à-vis men in a given community or society which usually mediates their decision-making power and ability to access resources within the household or the wider community.

Studies have adopted different approaches to measuring women's status through proxy indicators. Caldwell's review focuses on maternal education (discussed further in section 1.2.2). Others have combined measurements of women's education with other indicators. For example, Smith and Haddad (2000) show that women's status (as measured by female to male life expectancy) and improvements in women's education (as measured by female secondary enrolments) are associated with positive impacts on nutritional status. The study estimates that improvements in women's status account for 11.61% of global reductions in the proportion of children who are underweight (low weight for age), and improvements in women's education secondary enrolments account for 43.01% of global reductions in the proportion of children who are underweight (low weight for age). **Taken together, the two indicators accounted for over half of the reductions in child underweight in the 1970-1995 period.** More recently, Apodaca (2008) uses the ratio of female to male primary school enrolment as a proxy measure of women's status in a multivariate statistical analysis of data from 137 developing countries and finds that more equal enrolment ratios are associated with reduced child stunting rates. The effect of the ratio of female to male primary school enrolment was significant in four Ordinary Least Squares regression models used to measure the effects of health conditions on childhood stunting [-0.22 (0.13); -0.05 (0.14); -0.16 (0.13); -0.15 (0.13)] (Apodaca 2008).

1.1.1 MATERNAL EDUCATION AS A RESOURCE IN HOUSEHOLD BARGAINING

There is a large body of evidence which demonstrates the strong link between women's education and child survival (Caldwell & McDonald 1982; Chen & Li 2009; Cleland & Ginneken 1988; Gokhale et al. 2004; Hobcraft 1993; LeVine 2004; Rowe et al. 2005; Schnell-Anzola, Rowe & LeVine 2005). However there is less research on **how** or **why** education makes such a difference, although there is some evidence that more highly educated women benefit from:

- *Direct access to resources* through improved income earning potential.
- *Indirect access to resources and decision-making power* through women's improved status in the household.

Although many studies of the effect of *maternal* education on child health do not make direct comparisons with the effect of *paternal* education, a number of studies have established the relatively greater impact of maternal as compared to paternal education (Breierova & Duflo 2002; Maitra 2004; Uddin, Hossain & Ullah 2009).

The advantages of education for child health have also been shown to vary by geographic setting. For example DHS survey data from 17 countries showed a stronger relationship between maternal education and child survival in urban as opposed to rural areas (Bicego & Boerma 1993). The authors hypothesise that in this case education can be shown to enable women to manipulate important bureaucratic structures (such as healthcare services) which exist in greater size and complexity within urban settings. They also suggest that children of women in rural areas may benefit less from education, if their mothers are constrained by more rigid traditional structures and norms.

Links between higher maternal schooling and higher immunisation coverage in East Africa (Jones, Walsh & Buse 2008) may also reflect the importance of maternal education for enabling women to negotiate health services more effectively. Evidence from rural Punjab also found that maternal education improves child care practices such as the use of rehydration therapies as well as immunisation uptake (Das Gupta 1990).

Box 2: Pathways of influence: Maternal education and psychological health

Research has captured evidence of an interlinking chain of benefits around psychological well-being and education for women and their children. **For example:** there is evidence to suggest that women who have some degree of control over family-resource allocation are at lower risk for depression than women without control over resource allocation (Rahman, Iqbal & Harrington 2003) as well as evidence that increased education is associated with lower risk for depression (Patel, Rodrigues & DeSouza 2002). On the other hand, maternal depression increases the risk of growth failure for infants (odds ratio 3.91, 95% confidence interval 1.95-7.86) (Rahman et al. 2004).

As the evidence on maternal education demonstrates, children benefit when their mother's status is raised. It has been hypothesized that this is related (among other things) to **increased decision-making**

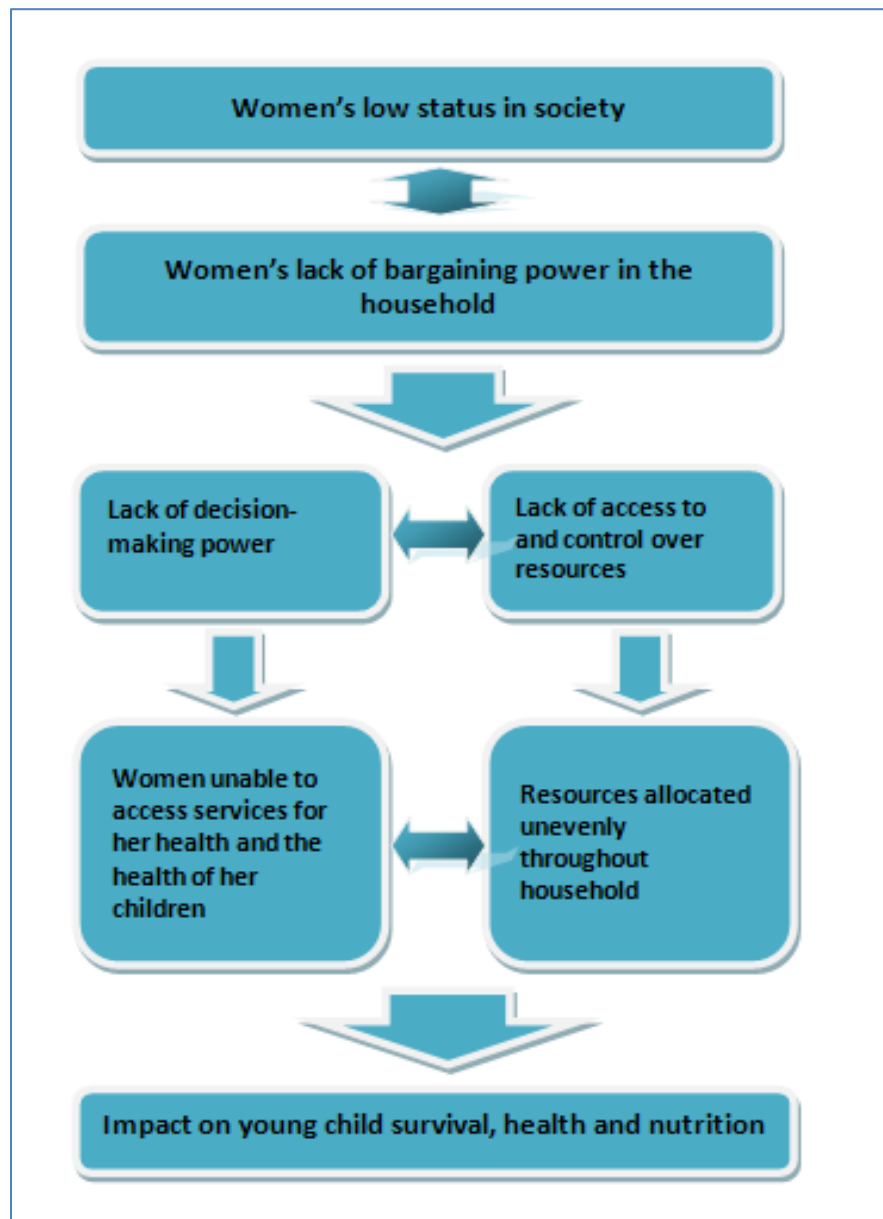
power and increased **access to and control over resources**. These two factors are in fact often interrelated, since women in households may wield more control over their resources when they have greater decision-making power, or vice versa. However in some situations it is also conceivable that mothers might have access to resources and simultaneously be unable to influence the decision-making process involved in the use and control of those resources. Studies may therefore explore these factors separately or in combination.

Decision-making power and access to and control over resources are key elements of women's bargaining power within the household (see Box 3 for a definition of intra-household bargaining). Figure 1 (see below) provides an interpretation of the way in which women's bargaining power reflects both decision-making power and access to and control over resources and the effect these may have on child health and nutrition and ultimately on child survival. The studies included in this section reflect multiple and interlinking aspects of intra-household bargaining power and processes.

Box 3: Introducing intra-household bargaining

Bargaining as a concept was established by Sen's theory of 'intra-household bargaining' (Sen 1990) which illustrates how inequality between different members of a household effects its decision-making processes and allocation of resources. According to Sen, an individual's 'entitlements' to make decisions and use resources are determined by their position within the household, both in terms of their 'perceived contribution' and in terms of their 'breakdown position' (their social and economic position were the relationship to end or break down). Where women have fewer opportunities to earn income outside of the home, and where child care and domestic duties are perceived as 'lower status' contributions, women's bargaining power is diminished, as their position is more vulnerable in the event of a 'break down' in the relationship.

FIGURE 2: DIAGRAM DEPICTING THE RELATIONSHIP BETWEEN WOMEN'S STATUS, INTRA-HOUSEHOLD BARGAINING AND CHILD SURVIVAL, HEALTH AND NUTRITION



The following sections explore in more depth the two elements of women's bargaining power identified in this diagram – decision-making power and access to and control over resources – with a view to unpacking some of the ways in which these influence the health and nutrition status and outcomes of young children and infants.

1.1.2 ACCESS TO AND CONTROL OVER RESOURCES

As seen in the previous section, education can be considered a resource for women to draw on, which may have empowering effects for their own health and well being, as well as assisting them to provide

improved care practices for their children. However there are also other important resources which may also be allocated unevenly between women and men.

Researchers have drawn links between women's access to and control over financial assets and improved nutritional outcomes and health preventative behaviours for their children. For example large-scale quantitative surveys conducted in the following countries found that:

- In **Bangladesh** parental asset statistics showed that a higher proportion of pre-wedding assets⁵ held by mothers decreased the morbidity of preschool girl children (coefficient of illness days = -2.317; z-score = -2.08). While a higher share of current assets held by father reduced preschool boys' morbidity (coefficient of illness days = -2.054; z-score = -1.94) (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);
- In **India** (in urban poor areas) the likelihood of children not receiving vaccinations was significantly associated with a mother's lack of financial autonomy (odds ratio=0.6267; 95% confidence interval=0.4084-0.9615), and with lack of educational attainment (odds ratio=0.2384; 95% confidence interval 0.0791-0.7178) (Agarwal & Srivastava 2009).

Box 4: Women's purchasing power

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. Quantitative surveying of 191 households found that women's income was one of the key variables that predicted household use of a bed-net. Qualitative interviewing involving men and women in sex-disaggregated Focus Group Discussions (23) and semi-structured interviews (16) 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. The study found on the other hand that bed-nets which had been purchased by the male head of household were more likely to be used by men themselves as they perceived their own need as greater, given their breadwinning role in the household (Rashed et al. 1999).

⁵ Household survey data from 47 villages in three rural areas in Bangladesh are used. Besides detailed information on agriculture and nutrition, the survey also contains data on individual current asset holdings, premarital assets, marriage transfer payments, and family background characteristics for husbands and wives. Resource control is measured by maternal share of current assets, maternal share of premarital assets and maternal share of marriage payments.

These two sections have highlighted that:

- Maternal education correlates powerfully with child survival and there is evidence to suggest that women who are more highly educated have both greater earning power and improved status within the household which enables them to gain greater access to and control over resources for the benefit of their children. Education may also enable women to negotiate modern bureaucratic systems (such as health services) more effectively;
- While paternal education also has an effect on child survival, there is nevertheless a greater effect from maternal education;
- There is a virtuous circle in which women may benefit psychologically from education, which decreases their likelihood of depression and in turn reduces potential ill-effects on their children's health (which has been shown to suffer in the case of their mother experiencing depression);
- Women's increased access to and control over financial resources has also been associated with improvements in child nutrition and health preventative behaviours such as child and infant immunisation.

1.1.3 DECISION-MAKING AND ACCESS TO AND CONTROL OVER RESOURCES: A COMPLEX RELATIONSHIP

The previous section demonstrated the benefits for children when women have improved access to resources such as education and income, especially when they are able to have some control over finances. There is also evidence that women's increased decision-making power has positive outcomes for children. This section examines how this process works in more depth.

The relationship between **decision-making power** and **access to and control over resources** in intra-household bargaining processes has been particularly well investigated with regard to **treatment-seeking behaviour**, particularly for children with malaria.

A number of studies have found that mothers' ability to seek treatment for children with fever is closely related to their ability to access resources both independently and from others within the household, for example, a study in Benin (cited in Box 4) found that expenditure on treatment was positively correlated with women's income (Rashed et al. 1999). Hausmann Muela et al. (2000) used qualitative case studies to explore how mothers obtained money for treatment costs for a recent hospital attendance for a feverish child in one community in Tanzania. In this community women generally had less access to wage labour opportunities, productive resources and labour than men. Here, marital status influenced women's access to resources: women who were married to the sick child's father could almost always count on his help in seeking treatment, whilst those not in a permanent relationship were limited to support from their own families (Muela et al. 2000). In a study using a combination of qualitative and quantitative rapid assessment methods by Anyangwe et al. (1994) on gender issues in the control and prevention of malaria and urinary schistosomiasis in

Cameroon, the main factor found to determine women's treatment-seeking for their children was men's control over financial decisions (Anyangwe et al. 1994). In a quantitative survey conducted with 902 children in Senegal, Franckel & Lalou (2009) found that mothers were more likely to initiate home-based care due to their smaller budgets, but when men did become involved, they were more likely to seek bio-medical care and to fund it from their own budget (Franckel & Lalou 2009).

A number of studies in different contexts have also found that norms of decision-making about treatment for children are also significant influences on mothers' ability to seek treatment for illness. Decision-making is often the prerogative of males and senior household members, especially in deciding about the seriousness of an illness or the point of decision-making about whether to seek assistance beyond the home or to transport the child outside of the community (Molyneux et al. 2002; Orubuloye et al. 1991). The relative power of fathers as decision-makers was influenced by a range of contextual factors. For example Molyneux et al. (2002) found that in Kenya mothers' treatment-seeking preferences were influenced by their age and their position in different household forms and in rural or urban settings⁶. A qualitative study in Ghana found co-habitation was the main factor influencing paternal decision-making, so that a father resident with his wife and children had greater authority in decisions about when and where healthcare was sought for a sick child than one who lived in a separate residence (Asenso-Okyere et al. 1997).

However a number of studies found that such norms of decision-making interact with access to and control over resources to influence outcomes in household bargaining processes. Several qualitative studies have investigated this relationship in Ghana. Asenso-Okyere et al. (1997) found that mothers sought treatment for a sick child without consulting the father of the child as long as they were able to pay for the treatment; this was especially the case in polygamous households where husbands lived separately from their wives. However, this study and another conducted in northern Ghana (Livingstone 1995) found that mothers generally consulted the male head of household about treating a child, where he was expected to pay for treatment, the illness was perceived as serious and/or the mother wanted to take the child outside the community for treatment (Asenso-Okyere et al. 1997; Livingstone 1995). In a study combining quantitative and qualitative methods, Ahorlu et al. (1997) found that those household members who had covered the cost decided what treatment should be sought (which in most cases was the husband), whilst in a few cases it was the mother-in-law, despite the fact that the mother was, on the whole, the main caretaker (Ahorlu et al. 1997). 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 whereby fathers (in particular fathers who were married to the mother of their children, and their natal families) were seen as the 'owners' of children who were therefore expected to make decisions about treatment-seeking, in particular travelling to a health facility (Tolhurst et al. 2008).

These processes have been explored in other contexts beyond Ghana. 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

⁶ As in previous studies mentioned, women's bargaining power was influenced by her position in a nuclear as opposed to an extended family (where she might fall under the authority of her in-laws as well as her husband) and the majority of the nuclear-form households were based in an urban area whereas the majority of the extended-form were based in a rural area.

needed to enable access to resources or decision-making (Mwenesi, Harpham & Snow 1995). In Yemen, al-Taïar 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-Taïar et al. 2009).

The studies above have, on the whole, been focused on treatment-seeking for malaria but there are benefits for other aspects of healthcare seeking which relate to and rely on the interaction between women's decision-making power and their access to and control over resources. These have been investigated quantitatively in terms of outcomes (see Box 4 below) and qualitatively in terms of process as discussed in the studies below.

Box 4: Pathways of influence: decision-making power and women's access to healthcare

A quantitative study using data on 18,614 children from the National Family and Health survey in rural India explored the relationship between indicators of women's decision-making power and access to and control over resources on use of prenatal care, hospital delivery and child mortality. The study found that a unit increase in woman's decision-making power and control over household resources (combined to produce a "bargaining power index") increased the demand for prenatal care by 40% points and the probability of hospital delivery by 25%, both of which contributed significantly to a reduction in the risk of child mortality (Maitra 2004).

A qualitative study of the determinants of infant feeding in the context of HIV conducted in three resource-poor countries (Cambodia, Burkina Faso, Cameroon) revealed a complex relationship between women's access to and control over resources and their wider decision-making power (Desclaux & Alfieri 2009). In Burkina Faso, a father's approval of a decision to formula feed was seen as important by most mothers, partly in order to secure resources to purchase formula. However, an infant's paternal grandmother was seen as having the main decision-making power regarding infant care and feeding, and husbands who were supportive of women's decision to formula feed due to their HIV status could be helpful in influencing their mothers' decisions. In all sites women's ability to choose an appropriate infant-feeding option for their HIV status (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-positive and sharing this information in the relationship), or inclusion in a research or NGO project (ibid.).

Aubel has argued that attention should be paid to the networks of carers that influence child health and nutrition given that in many societies child care is carried out collectively and with complementary inputs from different household members (Aubel 2011a). 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 5 months (Aubel, Touré & Diagne 2004).

A small-scale, in depth qualitative study undertaken in Brazil also found that the role of fathers and grandparents was important in supporting or opposing breastfeeding among 13 women who chose to exclusively breastfeed (Machado & Bosi 2008).

The studies in this section have touched on aspects of household headship, structure and composition as important factors in intra-household bargaining. The next section explores these aspects in more depth, looking at ways in which women experience access to and control over resources and decision-making power in different households and how those different household types may influence child health and nutrition outcomes.

This section has highlighted that:

- Women's ability to seek treatment for sick children often depends on their relationship with the children's father and whether or not they are able to involve him in the decision-making process;
- Men's involvement in decision-making can increase the likelihood of children benefitting from decisions which require a larger budget (such as a journey to a clinic), whereas women's smaller budgets are a restriction on the type of health care women can access;
- 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 young members (such as mothers and their mothers-in-law)
- Decisions on other aspects of child health and care are also influenced by intra-household bargaining; for example infant feeding practices sometimes reflect the influential role of senior women and husbands which can lead to both positive and negative outcomes for child health nutrition outcomes. There is scope for more investigation of the potential benefits for child health of engaging with men and senior women for child feeding practices

These findings nevertheless underline the importance of women's financial and decision-making autonomy in relation to child health and nutrition outcomes

1.1.4 HOUSEHOLD HEADSHIP, STRUCTURE AND COMPOSITION AND INTRA-HOUSEHOLD BARGAINING

Researchers have found that **household headship** influences access to and allocation of resources for child health. Household headship refers to the person within the household who has ultimate authority for decision-making and allocation of resources. It has been hypothesised that **children in some contexts, 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).

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-scores⁷ as compared to fathers' income. 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).

Researchers have also found that 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 would 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).

Research has shown that the benefits and disadvantages for different types of households may depend on context. For example a study comparing outcomes among children of resident male-headed households and children of *de facto* female-headed households in Western Kenya, found that while fewer children of female-headed households had low weight-for-age, more of them had low height-for-age which suggests that they had experienced malnutrition for some period in the past (i.e. chronic malnutrition). The authors demonstrated that there were trade-offs in the ways families of different types coped under different circumstances and yet did not find clear evidence that one type was more beneficial than the other for children's nutritional status⁸ (Onyango, Tucker & Eisemon 1994).

Other researchers have argued that comparison of male and female headed households will not necessarily yield useful insights into intra-household allocation of resources since they are essentially

⁷ Measurements of malnutrition among children often rely on calculating the deviation of an individual child's weight-for-height, height-for-age or weight-for-age deviates from the median value of a reference population which is then divided by the standard deviation of the reference population to produce a Z-score. These scores indicate different aspects of malnutrition. Low weight-for-age (WAZ) may demonstrate that the child is moderately or severely underweight compared to other children in its age group. If a child has been malnourished over a long period they are likely to have had their growth stunted and have a lower height-for-age (HAZ) score. Where children have a low weight-for-height (WHZ) they are likely to have experienced acute shortage of food and will be wasted.

⁸ While *de facto* female heads had more control over their agricultural income-generating activities, they grew fewer food crops and used less for home consumption. However they were able to purchase food for the household with the remittances of their husbands who had migrated for work. On the other hand, women in male-headed households had lower budgets based on the money their husbands gave them for household expenses and had less control over agricultural income generation. Despite their lack of control over sales of food crops, they produced more types of crops in their daily work and retained more for their families' consumption.

different categories of household altogether. Male-headed households for example, inevitably include at least one other female adult alongside the male 'head' whereas female-headed households are defined by their absence of a male adult, whether temporary or permanent (Bruce & Lloyd 1997). Furthermore, when responding to surveys on household headship, respondents might refer to older members within the household as heads, not because of their earning power, or even their decision-making authority, but because of their seniority in age (ibid.). Bruce & Lloyd conclude that regardless of household headship, **the most significant aspect of intra household processes for analysis is whether or not men are financially contributing to their children**, given that women wield less economic power relative to men. The authors claim in fact, that regardless of men's residential arrangements, "a noncontributing father in any household type is among the most severe welfare risks mothers and children face" (Bruce & Lloyd, 1997, p. 222).

Box 5: Women's purchasing power versus decision-making power in the context of household headship

Decision-making norms also affect preventive health practices in relation to young children. For example an ethnographic study in Southern Tanzania, using interviewing and participant observation, found that the acquisition, ownership and use of insecticide-treated bed-nets (ITNs), were closely linked to household headship. For female-headed households the most critical factor in acquiring a bed-net was whether they had the income to do so but for women who lived with their male partners the most significant factor was their ability to negotiate with the male heads of household. Interviews revealed that male heads were considered responsible for decisions related to ITN purchase as well as whether or when children could use them despite increased female contributions to household livelihoods (Minja et al. 2001). While female-headed households lack the income to buy bed-nets and so may benefit from income-making opportunities, females 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. 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 context, 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.

Researchers have demonstrated that greater authority over mothers by mothers-in-law has in some cases been associated with a detrimental effect on their grandchildren's health and nutrition (Castle 1993; Doan & Bisharat 1990; Simon, Adams & Madhavan 2002)⁹. **However, in some contexts, senior**

⁹ However this authority can also be beneficial in encouraging mothers to carry out good feeding practices. See section 1.4.2 for more discussion on infant feeding and senior women.

females such as grandmothers can prove an important resource for improving child health and care practices. For example in a qualitative study of management of childhood diarrhoea in southern Mali, caretakers (both mothers and fathers were interviewed in the study) reported that grandmothers had authority over household expenditure as well as playing an important role in diagnosing childhood illness, initiating the treatment process and deciding when and what traditional therapies should be administered (Ellis et al. 2007). Furthermore, Almroth, Mohale and Latham (1997) found in Lesotho in their qualitative study that grandmothers' advice on infant feeding during episodes of diarrhoea was ahead of outdated and flawed "health policy" which was still being encouraged by local nurses¹⁰. 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).

Castle's 1993 study among rural Malian Dogon and Fulani populations, which used a demographic survey and qualitative case studies, also identified **mothers-in-law as important resource keepers of food and cash for illness management and treatment.** However the impact of this on child nutrition appears to be mediated by household structure¹¹: Castle found for example that *children of mothers living with peers*, in laterally-structured households (with no mother-in-law) and *children in 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).

Doan & Bisharat (1990) similarly found in Jordan that **children of female heads or co-heads** (those women who made decisions jointly with their husbands) in *nuclear* or *laterally-extended households* had better nutritional status than those with mothers who were lived with their parents-in-law in *hierarchically-extended households*.

Finally, an additional aspect of household structure which can produce struggles over authority between women, is that of *polygamous households* where husbands share residence or resources with more than one wife. A qualitative study undertaken in Niger by Hampshire et al. (2009) found that competition between wives sometimes led to inequitable outcomes for their children, for example through a father paying more attention to the children of a newer wife to the detriment of the children of the first wife.

¹⁰ Medical advice offered by nurses had stipulated that food should be withheld from children during episodes of diarrhea. The authors note that most foods contain protein and carbohydrates which stimulate intestinal fluid absorption and help maintains nutrition and hydration. Therefore feeding should continue during such episodes.

¹¹ Castle identifies seven different types of household in rural Mali, ranging from those in which mothers may have a different rank depending on the structure of the household 1) lone daughter-in-law (small hierarchical); 2) one of several daughters-in-law (large hierarchical); 3) head wife with daughters-in-law (small hierarchical); 4) alone (nuclear); 5) sister-in-law (lateral); 6) woman living in her natal family (various); 7) female head (female headed). Laterally-structured households in which women are simultaneously free to pursue outside economic activity and yet also have some support for household work tend to show better outcomes for children than the hierarchically-structured households, in which women's autonomy tends to be lower and where women's burden of work is greater.

This section has highlighted that:

- In general, women's access to and control over financial assets has strong correlations with improved nutritional outcomes and health preventative behaviours for their children, however, household structure can modify this correlation in important ways:
 - Although access to financial resources is crucial in terms of women's ability to care for their children, where women lack authority within the household, they may find themselves more constrained to act even despite this – *access to* does not always mean *control over* resources;
 - There are benefits and disadvantages for children living in female-headed households as opposed to male-headed households, as the financial contribution of a working male remains an important source of income for children's health and nutrition.
 - Female-headed households can also exist in a variety of forms reflecting different levels of involvement of male and other senior family members.
 - Furthermore, hierarchies of age which impact on women's bargaining power can have a negative effect on their children's nutritional and health outcomes, for example where women are significantly younger than their husbands, or where women live in households where considerable power is held by a senior female (i.e. mother-in-law);
 - On the other hand the children of women who live with female peers or with senior females can also benefit from greater access to resources such as income, advice and alternative child care.
 - Children living in polygamous households may also experience worse health and nutrition outcomes if they are the children of a less 'important' wife.

1.1.5 WOMEN'S BARGAINING POWER AND CHILD HEALTH OUTCOMES: MULTIVARIATE ANALYSES

The sections above have demonstrated the multiple elements to take into account when exploring intra-household bargaining power and process in relation to child health and nutrition outcomes. The interwoven nature of these elements is the result of at least two reasons. First, understanding bargaining relies on exploring who controls and allocates resources as well as who has the power to make decisions within the household. Second, both of these elements are influenced in turn by multiple factors including women's status (in society and within the home) and household headship, structure and composition. As we have seen, studies have used qualitative and quantitative methods to explore different aspects of intra-household bargaining. To conclude this section we briefly outline the findings from a number of studies which have quantitatively explored whether and how different aspects of

women's bargaining power within households impact on children's health and nutrition, using a variety of indicators (Dancer & Rammohan 2009; Fantahun et al. 2007; Gaiha & Kulkarni 2005; Hossain, Phillips & Pence 2007; Kishor 2000; Linnemayr, Alderman & Ka 2008; Shroff et al. 2009; Smith et al. 2003).

These studies use different kinds of gender-sensitive indicators, and many draw on DHS or other national-level data sources in order to gain a broad understanding of the extent and nature of women's bargaining power in relation to child survival, health and nutrition outcomes. While these studies use a variety of measures to assess women's bargaining power, their results demonstrate the significance of women's status and bargaining power in relation to a number of aspects of child malnutrition, morbidity and mortality. These findings reflect contexts across Latin America, Sub Saharan Africa, South and South East Asia. Table 1 (see below) summarises the key gender-related findings and outlines the gender indicators and variables developed by the studies.

The broadest study to examine women's status for child nutrition, looking at 36 countries in three regions (South Asia, Sub Saharan Africa and Latin America and the Caribbean) using nationally representative DHS household surveys, is that of Smith et al. (2003). The study formulated two indices of women's status: one measuring women's decision-making power and the other measuring gender equality at a societal level. They found that the index of women's decision-making power provides a stronger association between women's status and child nutrition than the more general societal gender equality index (see Table 1 for more details).

Comparisons by region and income group demonstrate variations in relation to both the influence of women's status and its pathways (by both indices). **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 for figures).

In South Asia women's relative decision-making power has a strong influence on long-term and short-term nutritional status, while gender equality at the community level only influences children's long-term nutritional status and has a weaker effect than women's relative decision-making overall. 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 in which women's relative decision-making power is 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.

The study also explored the pathways for this positive influence on child health and nutrition and found that increased levels of women's decision-making were associated with **improvements in women's own health and nutrition** and with **improved caring practices** such as **prenatal and birthing care for women, feeding practices, treatment of child illness, immunisation, and quality of substitute caretakers**. However the study found one exception among these pathways. Increased decision-making power was associated with lower levels of breastfeeding, in other words **women breastfed less as their status improved**. The study does not draw any firm conclusions as to why breastfeeding suffers as women's status increases. The authors hypothesise however, that women may be unaware of the benefits of breastfeeding or may have been exposed to media messages promoting the use of bottles and formula. Other evidence from the study demonstrates that in Latin America and the Caribbean women who work for cash tend to breastfeed less. However in South Asia and Sub Saharan Africa women who work for

cash are actually found to breastfeed more. The authors hypothesise that in this case the work environments are significant as in South Asia and Sub Saharan Africa working conditions are less formal than in Latin America and the Caribbean, where they tend to be in urban contexts and where there is less flexibility for children to accompany mothers to work.

Other studies using similar indices to measure women's relative power within the household have found associations with child health outcomes. Gaiha and Kulkarni (2005) found in rural households across India that reduced stunting was associated with *increased maternal age* and *education* and with *residence in a female headed household*. A study undertaken in Egypt by Kishor (2000) used data from the country's 1995 DHS to construct an index of women's empowerment which combined a series of indicators chosen to represent a holistic conceptualisation of empowerment¹². Kishor's study provides multivariate analyses to explore the correlations between women's empowerment and child survival and health (as measured by whether children had received eight recommended immunisations). As the results included in the summary table suggest, two dimensions of women's empowerment were significantly correlated with both child survival and health: *lifetime exposure to employment*, and *family structure amenable to empowerment*.

Other studies included in the table 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; Shroff et al. 2009) and improved child survival (Fantahun et al. 2007; Hossain, Phillips & Pence 2007).

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 rely on broader contextual factors.

¹² Section 4 (on quantitative methods) of the Guidance document which accompanies this literature review provides more detail on the different types of empowerment indicators used by Kishor in this study.

This section has demonstrated that there are a number of ways in which women's bargaining power (as measured through different variables) is linked to children's survival, health and nutrition outcomes:

- There is evidence from countries across three regions (South Asia, Sub Saharan Africa and Latin America and the Caribbean) that children's nutritional status improves when women have greater decision-making power within the household although there are variations by region:
 - Improvements in women's decision-making power in the household had the strongest effect on child nutrition status in South Asia;
 - The effect was less strong, though still significant for Sub Saharan Africa;
 - In Latin America and the Caribbean there was only a positive effect on children's short-term nutrition status effect and only in households where women's relative decision-making power is very low.
- These improvements in women's status appear to have a stronger effect on child nutritional outcomes among poorer households;
- The pathways to these outcomes include improvements in women's own health and nutrition and improvements in caring practices such as prenatal and birthing care for women, in feeding practices, treatment of child illness and immunization;
- Breastfeeding is the only care practice which may become compromised by improvements in women's status. The reasons for this are as yet unknown but may be linked to women's exposure to marketing and promotion of breastmilk substitutes, including by health professionals, , to a lack of knowledge about the benefits of breastfeeding, a shift in social norms around infant feeding accompanying economic development, urbanization and other social factors, or to inflexibility in paid work conditions.
- Studies also show correlations between indicators of women's autonomy and child health and nutrition outcomes, including increased maternal age, education and residence in a female headed household, women's lifetime exposure to employment and whether they are part of a family structure amenable to empowerment and finally their able to make decisions to travel outside the home to pay visits to health institutions and to make decisions about household purchases.

Table 1: Summary of quantitative studies on aspects of women's bargaining power and outcomes for child survival, health and nutrition

Study author(s) and title <i>A brief explanation of the study is included where the bargaining aspect of the study is not clear from the title</i>	Location	Source of data	Gender index of bargaining power	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	First index of women's decision-making power used data on the difference between partners' education levels, their age difference, women's age at first marriage and finally whether she had independent access to income. Second index of "societal gender equality", was constructed using the difference in age-adjusted weight-for-age Z-scores of girls and boys under five years, the difference in age-adjusted vaccination score of girls and boys under five, and the difference in years of education of adult women and men.	<ul style="list-style-type: none"> 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.
Kishor (2000) "Empowerment of women in Egypt and links to the survival and health of their infants"	Egypt	1995/96 Egypt Demographic and Health Survey (EDHS95) A study using a nationally-representative sample of ever-married women aged 15-49 (n=7,121)	Indices of empowerment were constructed based on a core of over 30 indicators from the DHS data. 10 dimensions of empowerment were identified: financial autonomy, participation in the modern sector, lifetime exposure to employment, sharing of roles and decision-making, family structure amenable to empowerment, equality in marriage, devaluation of women, women's emancipation, marital advantage, traditional marriage.	Indices of empowerment significant in logistic regression models of both infant survival and health (proxied by whether 12-23 month children had received 8 recommended immunisations): <ul style="list-style-type: none"> woman's lifetime exposure to employment [infant survival model: 1.47 (p<0.001); infant health model: 1.20 (p<0.10)] Family structure amenable to empowerment [infant survival model: 1.25 (p<0.05); infant health model: 1.47 (p<0.001)]
Dancer & Rammohan (2009) "Maternal autonomy and child nutrition:"	Nepal (rural households)	2006 Nepal Demographic Health Survey A cross-sectional study using data from 4,360 rural	Women's household decision-making autonomy were measured through surveying the following questions: Questions 1-3 aimed to provide a measure of a woman's	<ul style="list-style-type: none"> 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,

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evidence from rural Nepal”		children aged 6-59 months for whom complete information is available with regard to health, household demographics, maternal characteristics and other household characteristics.	household decision-making autonomy with regard to herself and her household finances, who makes decisions within the household on: (1) woman’s healthcare; (2) making large purchases for the household; (3) making purchases for daily needs. Questions 4-7 aimed to indicate a woman’s ability to access healthcare for self. In getting medical help for self, women were asked whether: (4) distance to health facility was a problem; (5) having to take transport was a problem; (6) going alone was a problem; and (7) if getting permission to access healthcare for self was a problem.	where there is significant increase in weight-for-height z-scores by nearly 0.12 (Standard Error=0.063). <ul style="list-style-type: none"> 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” (this study explored aspects of women’s status in relation to their children’s nutritional outcomes)	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.	Index constructed using the following measures: household size, sex of household head, occupation, caste in terms of affiliation to a Scheduled Caste or Scheduled Tribe, number of children less than 5 years of age, proportion of female children under 5 years, proportion of children under 24 months, mother’s age at marriage, mother’s education, male–female wage difference, income per capita, whether the household has a toilet and a measure of distance to drinking water	<ul style="list-style-type: none"> 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, Adiar, Suchindran & Bentley (2009) “Maternal autonomy is inversely related to child stunting in Andhra Pradesh, India” (this study investigated which gender-sensitive indicators of women’s	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 (<i>n</i> = 821).	Index on women’s bargaining power constructed based on seven binary variables which covered four dimensions of women’s autonomy: decision-making, permission to travel, attitude towards domestic violence and financial autonomy	<ul style="list-style-type: none"> Two gender measures were significantly associated with child stunting: <i>Permission to go to the market</i> and <i>freedom to use financial resource</i>: 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

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autonomy were related to child stunting)				
<p>Fantahun, Berhane, Wall, Byass & Högberg (2006)</p> <p>“Women’s involvement in household decision-making and strengthening social capital – crucial factors for child survival in Egypt”</p>	Butajira, Egypt	<p>Butajira Demographic Surveillance Site</p> <p>Prospective casereferent (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.</p>	<p>Household decision-making was evaluated through a series of questions based on four areas: major decisions made (to move residence, rebuild a house, rent land); everyday household decisions such as the purchase of food and other items; decisions about visiting friends and relatives; and finally decisions about taking a family member to a health institution</p>	<ul style="list-style-type: none"> 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.
<p>Hossain, Phillips & Pence (2006)</p> <p>“The effect of women’s status on infant and child mortality in four rural areas of Bangladesh”</p>	Bangladesh (six sub-districts): Sirajgonj, Abhoynagar, Gopalpur, Fultala, Bagherpara and Keshobpur	<p>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 <i>thanas</i> (sub-districts) between 1988 and 1993 (n=7534).</p>	<p>Autonomy index was derived from indicators such as whether a woman is permitted to take a sick child to hospital outside her village alone, to go outside for recreation and to travel for family planning.</p> <p>Authority index was constructed from indicators of the respondent’s decision-making power regarding spending money for medicine when her child is sick, seeing a doctor when she is sick, how long a child should attend school and to whom and at what age a daughter should be married</p>	<ul style="list-style-type: none"> 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)]

1.2 GENDER DIVISIONS OF LABOUR

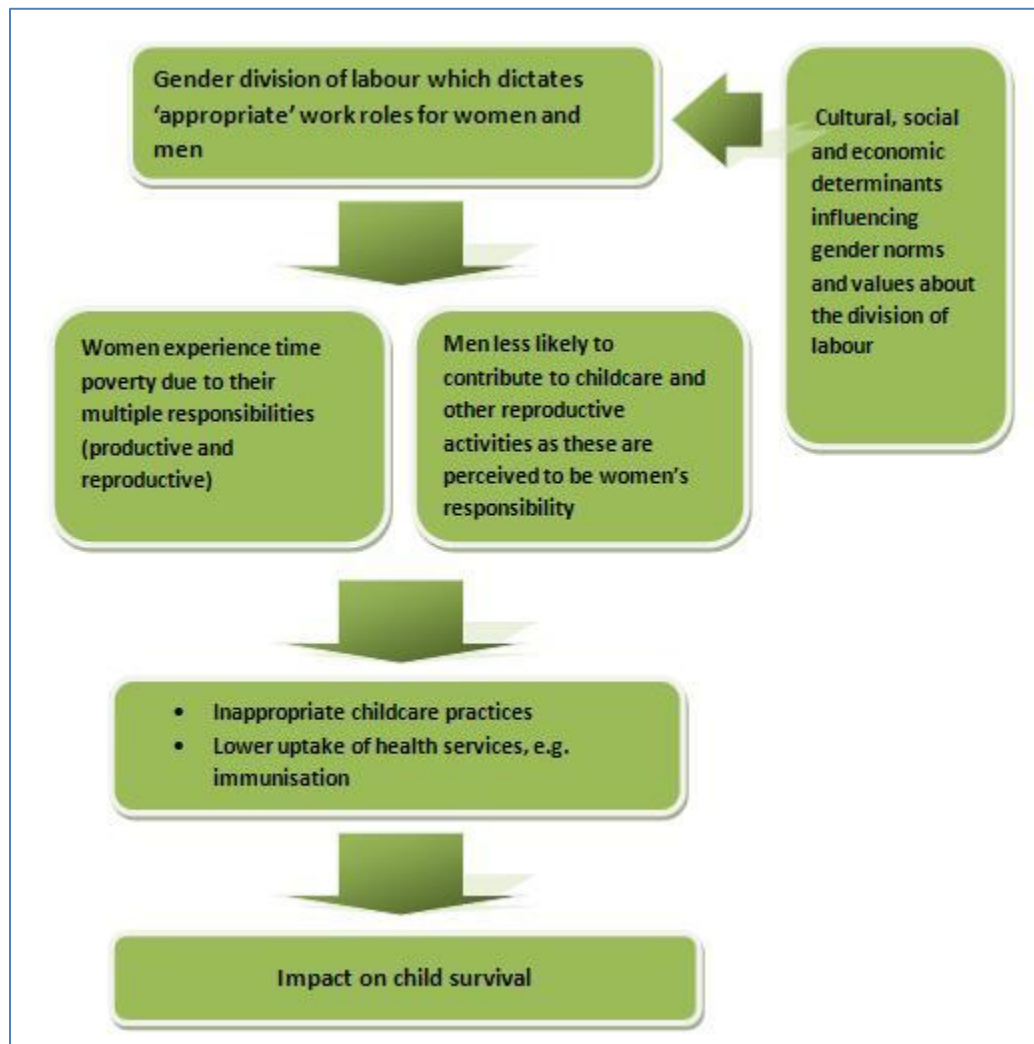
This section builds on the findings on intra-household bargaining, access to and control over resources and decision-making power to discuss the ways in which gender divisions of labour impact on child health and nutrition.

Box 6 Defining gender divisions of labour

Gender divisions of labour refer to the work, roles and responsibilities allocated to women and men and the rewards or benefits associated with these at different points in the life cycle in any given society. In most societies women and girls are responsible for the majority of 'reproductive' work (the work required for the maintenance of a household such as cooking, cleaning, fetching firewood and water, and the care of children and the sick) (Esplen 2009; Kabeer 1994). This work is often 'invisible' in that it is not remunerated and is given a low value, and must often be carried out in addition to 'productive' work (the production of food, or activities that earn money), putting pressure on women's time (Elson 1998).

There are a number of ways in which the gendered nature of labour impacts on child survival, health and nutrition. The following sections highlight the interconnected issues which mark this issue: mothers' time poverty, mothers' employment in 'paid' work, the difficulty in accessing alternative child care and finally, paternal roles and child health. Figure 2 provides a visual representation of key pathways through which the gender division of labour impacts on child health and nutrition. The sections below discuss the issues highlighted in the diagram in more detail. The diagram is repeated in section 2 which discusses evaluations of gender-sensitive interventions in order to illustrate different types of strategies for dealing with gender dimensions of child survival, health and nutrition.

FIGURE 3: DIAGRAM DEPICTING THE RELATIONSHIP BETWEEN ELEMENTS OF THE GENDER DIVISIONS OF LABOUR AND CHILD SURVIVAL



1.2.1 MOTHERS' TIME AND CHILD HEALTH PRACTICES

Leslie reviews the available evidence on the time costs of four crucial child health technologies: growth monitoring, oral rehydration therapy, breastfeeding and immunizations (Leslie 1989). There is some evidence that **time constraints on women have prevented them from uptake of immunisation services** in both Ghana (Haaga, 1986 cited in Leslie 1989) and in Haiti (Coreil, 1987 cited in Leslie, 1989). Leslie argues that time costs to primary carers of children need to be taken into account in the development and provision of such technologies (including efforts to improve their time efficiency) in order to increase uptake.

Ibrahim et al. (1994) also found that non-farming mothers in rural Somalia (i.e. those with more time available for child-care) were more active in the use of Oral Rehydration Therapy (Ibrahim et al. 1994).

More recently, a qualitative study in rural Gambia, found that women perceived that their heavy workload, involving the sole care of the child as well as the responsibility for other farm work, prevented them from always practicing that they knew in relation to child care (Mwangome et al. 2010). A longitudinal study of breastfeeding and women's work in the Brazilian Amazon following 17 women and their children (0 to 16 months of age) found that the trade-off for women in this community involved their need to slowly reintroduce time spent farming cassava (work which is usually shared among female members of the community), while also continuing to breastfeed their infants. The study found that the child's weight decreased as the time spent on subsistence work increased (Piperata & Mattern 2011).

Section 1.1.4 explored the significance of household structure and composition in determining how women were able to allocate resources for their children's health and nutrition. Studies have shown that the disadvantages are often related to extended household structures where women have less decision-making power. **Conversely, there is also evidence that the time available for child care may increase for mothers in households where women co-reside with their husbands' families or co-wives.** For example, Castle (1993) shows that women are more likely to seek treatment for child illness where the burden of child care is shared in a household with more available carers and where the mother has peers (such as in a household where a number of daughters-in-law are answerable to a mother-in-law, or where the mother lives only with sisters-in-law). She suggests this may reflect the system of shared labour, where women are able to rearrange their time more easily.

Using DHS data to report on household structure and the practice of exclusive breastfeeding in Nicaragua, Espinoza (2002) also finds that women living in a household headed by another female relative were more likely to breastfeed exclusively compared to those women who were heads of their own household. The author suggests that women who are household heads may have less family support as they were found to be more likely to live in smaller families, to be single and to be employed outside the home (Espinoza 2002).

This section has highlighted that:

- Women's responsibilities within the household encompass a considerable number of tasks in maintaining the household and its members, as well as responsibilities external to the household which can lead to women's time poverty and thus impede the way in which children are cared for;
- Household structures which include more female members may mitigate some aspects of women's time poverty by increasing the numbers of potential carers and workers available for household tasks.

1.2.2 MOTHERS' PARTICIPATION IN PAID/'PRODUCTIVE' WORK AND CHILD HEALTH

As discussed above, women's multiple responsibilities can lead to time poverty which, when coupled with the lack of alternative childcare or support, can impact negatively on child health outcomes. This section will move on from women's time poverty to focus on the participation of mothers in paid, or 'productive' work. Studies demonstrate there is contradicting evidence on the benefits of increased income through women's participation in paid work for child health and nutrition. In section 1.1.5 one of the studies reviewed found that breastfeeding was affected by whether women were involved in paid

work. Interestingly, while in Latin America and the Caribbean women who worked for cash breastfed less, women in South Asia and Sub Saharan Africa who worked outside the home actually breastfed more. The authors hypothesised that the less 'formal' working conditions in the latter two regions may be more conducive to breastfeeding than in the more 'developed' work settings of Latin America and the Caribbean. The studies in the following section explore the issues of women's work and breastfeeding in more depth, specifically from the perspective of women's involvement in paid employment.

The stereotype that 'productive' (paid) work is a 'man's role', historically and currently prevalent in many societies often means that working practices, structures and legislation are not conducive to combining paid work with child care practices such as breastfeeding. As Worugji & Etuk (2005) discuss in their conceptual paper on the National Breastfeeding Policy in Nigeria, legal provision for maternity protection does not allow sufficient time for working mothers to breastfeed exclusively for the first six months in line with global recommendations (Worugji & Etuk 2005). Health policies are therefore undermined by the failings of legal maternity entitlements in countries where such legislation has been inadequately formulated or where it is not well-publicised or adhered to. In addition, a large proportion of women's work is carried out in the informal sector which is not covered by legislation.

Even where there is legal provision to enable mothers to combine breastfeeding with work, if women are not given sufficient information about this, they may feel forced to adapt their breastfeeding practices in ways detrimental to their children's health. Among a sample of working women in Bangladesh (n=238) only 2% had continued to exclusively breastfeed into the fifth month of their employment and 99% were unaware of maternity entitlements which allowed them to take breaks in order to breastfeed (Haider & Begum 1995).

Lack of flexibility in the workplace and difficulties securing good quality child care produce trade-offs in terms of the potential benefits of income generation and on the other, the need for children to receive appropriate care. For example, women's engagement in paid or 'productive' labour has been found to have positive outcomes for children's nutrition status. Based on data collected from 12-18 month children from 80 households randomly selected across 10 different low income neighbourhoods in Nicaragua, it was found that children of paid working mothers in Nicaragua had greater weight for height than those whose mothers did not do paid work, having controlled for confounding variables of maternal differentiation, household wealth and child gender¹³ (LaMontagne, Engle & Zeitlin 1998). On the other hand however, qualitative interviewing of 120 new mothers in KwaZulu-Natal, South Africa found that the decision to stop breastfeeding exclusively during the first six months was strongly linked to the economic necessity of seeking employment (Seidel 2004). Furthermore, in other contexts research has found benefits for children whose mothers do not do paid work outside the home. For example researchers found that among 120 mother-infant pairs in a poor Khartoum township, the

¹³ The sex of the child was found to be a potentially confounding factor as the study found that girls were more likely to experience inadequate child care. However, based on the broader literature in Latin America (where little evidence for gender bias of this nature has been found) the authors hypothesise that this may be due in fact to mothers' decisions to take a female child along to a less suitable work environment (deemed in the study as an indicator of 'inadequate care') while being more likely to leave a male child with alternative child care because of the perceived need to 'protect' a female child. In relation to household income, Basu & Basu (1991) found that there was a greater risk of mortality among the poorest section of working mothers in a slum population in Delhi which they link to lack of time for over-burdened and under-resourced mothers to carry out appropriate child care practices.

children of mothers who did not work outside the home had better growth and fewer days of illness during their first 12 months compared to those infants whose mothers did paid work outside the home (Harrison, Brush & Zumrawi 1993).

Other research suggests that rather than simply viewing maternal employment as either a panacea or a problem for child health and nutrition, **instead, attention should be paid to exploring the socioeconomic factors and pressures which drive women to seek paid employment and the conditions under which they perform their paid work.** For example a study conducted in Guinea (based on anthropometric data on 1,428 children between 0-59 months residing in the same house as their mothers) demonstrated that there is a trade-off between the negative effects of maternal employment in terms of reductions in quantity and quality of child care and the positive effects of additional income (Glick & Sahn 1998).

Importantly this study highlights the methodological necessity of controlling for confounding factors which might influence child nutrition while also influencing women's decisions to enter the labour market, such as a family's low income. The authors emphasise that in light of the trade-off between maternal income and child care, better earnings must be guaranteed and alternative child care support made available if child health outcomes are to be achieved, beyond general benefits to the household.

This section has highlighted that:

- Breastfeeding practices are undermined by a lack of appropriate legislation for maternity entitlements and a lack of adherence to existing legislation (where such entitlements have not been communicated well to women and/or where employers are remiss in their fulfillment of such requirements);
- Women's paid labour can have positive outcomes for child health and nutrition by increasing the household income, however there can be negative effects on child health where women work outside the home and are unable to procure appropriate alternative child care.

1.2.3 ALTERNATIVE CHILD CARE AND CHILD HEALTH

The previous sections have highlighted the difficult trade-offs mothers face when attempting to balance their multiple responsibilities as well as caring for their children. There is little research on alternative child care resources available to mothers. The two studies below underline the usefulness of learning more about **alternative child care opportunities** for mothers – both in terms of its availability and its appropriateness for the children themselves.

A study using a survey of a sample of 150 children identified through the waiting-lists of 17 day-care centres in Pokhara, Nepal, found that the **unavailability of child care support** was significantly associated with a 3-fold higher risk of being underweight and 4-fold higher risk of being stunted among children aged 10–24 months whose mothers were not engaged in paid work. Equally, unavailability of child care support was also significantly associated with a 4-fold higher risk of children being underweight among children aged 10-24 months whose mothers were engaged in paid work (Nakahara

et al. 2006). The authors argue that mothers engaged in paid work as well as poor mothers who are not in paid work nevertheless face time constraints due to their reproductive responsibilities and lack of appropriate substitute caregivers. The use of peer care, or younger family members, by both working and non-working mothers was also associated with a 7-fold and 4-fold higher risk of children being underweight and stunted, respectively (ibid.)¹⁴.

A study conducted in Haiti, based on interviews with 106 women across three villages, found that a greater proportion (38%) of those households with a malnourished child (based on weight for age measurements) used an alternate, male care giver when the mother was away from the household (Devin & Erickson 1996). These male care givers were typically used as a “last resort” where alternative female carers (such as grandmothers) were not available. Follow-up interviews were carried out with women and men in households where wives had reported that men were left to care for children and researchers found that although men fulfilled many of the same duties as the women (preparing meals and feeding children) they also had other responsibilities (such as moving animals between grazing areas) which required them to leave the children at times during the day. **As these were the households in which alternative older female caregivers were not available, child care was then passed to siblings, often very young themselves and ill-equipped for the responsibility of caring for infants.**

This section has highlighted that:

- Both working and non-working mothers would benefit from access to appropriate child care support.
- Under-nutrition is linked in some cases to the lack of appropriate alternative carers within families due to precarious socio-economic circumstances and the pressure on parents and other members of the household to secure livelihoods.

1.2.4 PATERNAL ROLES AND CHILD HEALTH

While men may become involved in child care in situations where there are no available female carers (as the Haiti study mentioned above demonstrates) generally the gender division of labour between men and women dictates that women provide the majority of the child care and men fulfill some sort of income-generating role. In recent years however there has been a growing interest in **the role of men in relation to child care** and although much of this research has focused on post-industrial contexts, some studies have specifically explored father’s roles in low and middle income contexts (Barker, Lyra & Medrado 2003; Hossain et al. 2005; Lyra 2003; Roopnarine et al. 1995).

¹⁴ As discussed in section 1.1.4 peers can both help and hinder child health and nutrition outcomes depending on the composition and structure of the household. This finding lends strength to the argument that alternative care for children is sensitive to context which should be taken into account when exploring opportunities for addressing child care provision.

Box 7 Men and child care

A small number of studies have identified gendered beliefs and perceptions that influence men's caring roles. For example Roopnarine et al (1995) and Hossain et al (2005) show how men are more likely to engage in play with their children than in other forms of child care, such as feeding or cleaning. This is linked to perceptions that women are more 'suited' to the daily tasks of maintaining household members, but more positively, also suggests that men are engaging in useful aspects of child care in terms of children's psychological growth and well being. Researchers have also explored the potential for men to become more involved in key child care practices. For example a study undertaken in an urban suburb in Tanzania which involved interviews with ten new fathers attending reproductive and child health clinics with their partners found that these men were challenging traditional gender roles by contributing to household chores and care of their children (Mbekenga et al. 2011). The authors highlighted that there is often a lack of resources available for fathers concerned about their family's health and yet excluded from reproductive and child health services conventionally focused solely on women.

A review of studies of men's involvement in health (Barker et al. 2003) highlights **the lack of research on men's roles and responsibilities** and draws on findings from the small number of existing studies to identify some of the constraints men experience in fulfilling their gendered responsibilities as fathers and married men. For example, there is evidence to suggest that young men experience considerable anxiety about their role as financial provider of young children, and yet very few programmes have examined the multiple roles of fathers, neither do they "promote greater involvement by fathers in child care and maternal health" (p. 12). A study investigating the determinants of immunisation uptake for children aged 12-18 months found that fathers' involvement in decision-making was linked to a higher rate of completion (odds ratio = 5.7, 95% confidence interval [CI]: 1.5-21.7) which suggests that positive results can be reaped through involving men in child health care provision¹⁵ (Brugha, Kevany & Swan 1996).

The analysis of men's roles by Barker et al. also suggests that the framing of men's lack of involvement with their children as "irresponsibility" does not recognise the complexity of men's experiences (Barker et al. 2003). For example, the degree of fathers' involvement with and provision for their children may be influenced by their life stage. Research from the Caribbean exploring patterns of fatherhood from adolescence through to adulthood demonstrates qualitatively that young fathers may often prioritise their own needs when spending their income and in many cases father children in their adolescence as a way of "establishing their manhood" even without the means to support children. However at a later stage in life, these same men may exchange their temporary alliances for more permanent unions with female partners and go on to "devote considerable resources to "inside children" —those with whom they currently reside" (Brown & Chevannes, 1998 cited in Barker et al 2003: 13). This does not however

¹⁵ This finding was only true for men who spoke English and neither factors (men's participation or their ability to speak English) was associated independently with children's immunisation status. The authors suggest that where fathers have a higher rate of education, programmes designed to include them in child health services may experience greater success in timely immunisation.

address the matter of how the mothers of infants and young children cope while the fathers of their children are establishing themselves in the earlier stage of their lives.

This section has highlighted that:

- Although men have not traditionally fulfilled caring roles, there is evidence to suggest their greater input into child health/care could have positive outcomes for the health and development of their children;
- When men are involved in child care there is evidence to suggest that they tend to be involved in play rather than engaged in daily child care routines ;
- Men's roles are also context specific and should not be generalized, for example there may be important life stage and socio cultural influences that impact on their behaviour;
- It is important to find ways in which men can be encouraged to take a more active role in child health/care while also ensuring that existing power relations are not reinforced but challenged and transformed to become more gender equitable.

1.3 GENDER NORMS, IDENTITIES AND VALUES

As the previous section demonstrated gender differences are often manifested through divisions of labour, in terms of the different roles and responsibilities assigned to women and men. In this section the focus moves away from reproductive and productive labour to less tangible but equally significant aspects of women's and men's roles related to gender norms, identities and values. These norms, values and identities relate to cultural perceptions of what it means to be male and female, and to the intrinsic value assigned to being male or female. They may even form the foundation for abusive behaviour between the sexes, even to the extent of physical, psychological and sexual violence. The section will explore three aspects of gender norms, values and identities emerging from the literature, first, the significance of gender bias and how this impacts on child survival; second, the importance of taking gender norms and values into account when addressing infant feeding practices; and third, the risks to child survival among children exposed to domestic violence, which reflects gender discrimination at its most extreme.

Box 8 What are gender norms, values and identities?

Social norms are rules of behaviour adhered to by members of a community, based on their belief that others would expect them to behave accordingly. Such norms are context specific and may vary between countries and social settings.

Gender norms, values and identities reflect social norms specific to the 'rules' women and men should adhere to and perpetuate expectations about women's and men's capacities, characteristics and social behaviour whether these are implicit or explicit. Gender norms therefore do not represent what women and men are actually capable of rather they reflect expectations of women's and men's capacities and characteristics.

1.3.1 GENDER BIAS IN CHILD SURVIVAL

While the main body of this review focuses on the way in which gender dimensions mediate care of young children in general (boys and girls), this section will briefly outline the issue of gender bias in relation to health and nutrition outcomes for girls and boys.

Gender bias occurs when male and female identities are assigned different 'value' within the community they are born into, leading to boys and girls receiving different treatment, care and resources according to their given 'value'. There is a substantial body of research focusing on different aspects of gender bias, from sex selection to differential practices in immunisation. There are interconnecting social, cultural, political and economic factors which underpin son preference and bias against girls.

In some contexts, males are perceived as the economic lynchpin of future generations, and girls are a burden on resources and will eventually leave the family home due to marriage patterns. Parents may have made pragmatic choices based on their perception of how useful or valuable a male would prove over a female, particularly where the number of children born is restricted by the government, as in China. Parity and sex of siblings may also impact on a girl's life-chances (ICRW 2009). Whereas sex selection was driven previously through girl child neglect or infanticide, technology has advanced to

allow sex determination from an early stage in pregnancy. Pressure from circumstance or families may lead to terminations accelerating imbalances of sex ratios at birth (Interagency Statement 2011). Discrimination against female infants may also manifest in post-natal neglect through inadequate feeding, clothing, biased care practices or treatment-seeking for illnesses of a child (Das Gupta 1987; Li 2004); (Bhandari et al. 2005; Ganatra & Hirve 1994; Pandey et al. 2002; Willis et al. 2009)¹⁶. Although much evidence derives from South Asian contexts, such biases are also found elsewhere, for example from rural Peru (Larme 1997).

There is statistical evidence for gender-related biases in immunisation of children (Jones, Walsh & Buse 2008). Interestingly it is not just girls who experience this bias, but boys as well. While girls were less likely to have received complete immunisation in countries in Asia (Pakistan, India, Cambodia and Nepal) and Africa (Gabon, Gambia, Côte d'Ivoire, Ethiopia and Sierra Leone); boys in Africa were also found to be at a disadvantage in certain contexts (Madagascar, Nigeria and Namibia). While female disadvantage in these contexts is likely to reflect discrimination against girls (as highlighted above), it has been hypothesised that boys are less likely to be immunised due to fears of sterilisation through 'foreign' contamination of vaccinations (ibid.).

Other studies however have not found significant differences between girls and boys in terms of nutrition and health outcomes. UNICEF's 2010 publication Progress for Children found no difference between girls and boys in relation to underweight prevalence (ratio of 1.0) (UNICEF 2010). A study by Arifeen et al undertaken in rural Bangladesh, also found no inequities in child healthcare, either in terms of prevalence of illness or care-seeking patterns (El Arifeen et al. 2008).

1.3.2 MATERNAL AND PATERNAL NORMS, IDENTITIES AND VALUES AND INFANT FEEDING

As the previous section demonstrated, gender norms are produced by and interact with cultural norms in quite specific ways which can result in potentially harmful beliefs and practices. This section explores gender norms in specific socio-cultural contexts which significantly impact on whether breastfeeding is practiced and for how long. Infant feeding practices are not uniform across the globe and can differ according to strict cultural interpretations of when and how women should breastfeed and when and with what foods infants should be weaned.

Yet in general, breastfeeding is often viewed as a strictly female domain, within which men have not traditionally been included. However there is evidence to suggest that including men in education about breastfeeding could lead to improved infant feeding practices overall. For example, research conducted in Nigeria suggested that where men are not included in breastfeeding support programmes, their lack of knowledge may prove an obstacle to good practice (Aniebue et al 2010).

Women's own gendered identities related to norms of motherhood may impact on their breastfeeding practices. For example Paine and Dorea (2001) conducted surveys with 230 mothers whose responses were quantified using a scale to predict "traditional" attitudes. Reasons for prolonging

¹⁶ These studies identified, among other things, biases in expenditure for health, whether a child would be hospitalised, in the likelihood of accessing qualified care and how far parents were prepared to travel for qualified care advice.

or stopping breastfeeding varied according to where the women fitted on the scale. Women were found to fit three categories: the women who prolonged breastfeeding were those with the most traditional attitudes, who felt breastfeeding was an obligation and therefore a duty to be fulfilled for a longer period of time; and those with the least traditional attitudes, who felt that breastfeeding was a modern and liberating act. The women with moderately traditional attitudes were among those most likely to curtail breastfeeding and were described by the authors as in a transitional state between “the old style and new style of feminine behaviour” (p. 68). The authors do not elaborate beyond this rather vague explanation, however, this demonstrates that **opposite and apparently contradictory expressions of gender can have similar outcomes**, which must be taken into account when addressing decision-making about child care practices such as breastfeeding.

Finally, it is important to mention that gender norms and values are undergoing challenges and changes in the context of infant feeding decisions by mothers living with HIV/AIDS (Desclaux & Alfieri 2009; Hejoaka 2009). Exclusive breastfeeding is recommended for HIV positive mothers in contexts where formula feeding carries an unmanageable financial burden and is risky due to conditions such as contaminated water sources (Fletcher, Ndebele & Kelley 2008). However it is common in many contexts for mixed feeding to be practiced within the first six months, which carries greater risk of HIV transmission as well as other types of illness (ibid.). Gender norms may dictate that women breastfeed in order to behave as “good mothers” (Engelbrechtsen et al. 2010). In addition social stigma attached to HIV, which often has more serious consequences for women, means that mothers also fear disclosing their HIV positive status to their partners and families (Hejoaka, 2009). Both of these factors can impact on their decisions about whether to formula feed or to breastfeed exclusively since both of these choices may lead to their HIV status being revealed, as well as inviting censure from their communities for not behaving as a mother is expected to behave.

Section 1.1.3 also explored some aspects of HIV and infant feeding decision making, highlighting how other members of the household are involved in the decision-making process through different mechanisms; men because they may provide financial support for purchasing formula and older women, mothers-in-law or grandmothers, who often take a leading role in advising mothers on their feeding practices. A recent literature review entitled “The roles and influence of grandmothers and men: evidence supporting a family-focused approach to optimal infant and young child nutrition” (Aubel 2011b) commissioned by USAID’s Infant and Young Child Nutrition Project (ICYN) explores the issue of young child nutrition in HIV prevalent areas in considerable depth and concludes that

[In such areas] there is need for intervention strategies to adopt a more social-ecological and family-focused approach rather than one that focuses on one or more segments of the family system (e.g., the mother-child dyad or the reproductive couple) (Aubel 2011: iv)

These findings suggest that fathers’ and grandmothers’ involvement in feeding counseling could improve prevention success rates. However, such efforts to involve those with greater decision-making authority must take care to challenge rather than reinforce gender norms that maintain power hierarchies within households, which are ultimately damaging to children’s health.

This section has demonstrated that:

- Different gender norms can produce similar outcomes for child health and nutrition;
- Infant feeding practices are powerfully influenced by prevailing cultural and gendered norms and recent research has highlighted the importance of including men and other supporting members of households in breastfeeding education;
- The role of grandmothers as expert advisors to young women must also be taken into account in infant feeding and other aspects of child care;
- Addressing the challenge of infant feeding in contexts where HIV is prevalent requires a good understanding of the roles which supporting members of household may play, but also needs to take into account the difficulties women may face around disclosing HIV status to their family members;
- However it is vital that the inclusion of other members of the household in any aspect of child care is sensitive to gender discrimination against women and that interventions seek to foster collaborative care for infants, not undermine women's roles as carers.

1.3.3 DOMESTIC/INTIMATE PARTNER/GENDER BASED VIOLENCE AND CHILD HEALTH

In this final section of the review, the discussion turns to another serious threat to the survival, health and nutrition of young children: domestic violence. This issue is discussed here because various forms of gender-based violence, including domestic violence, reflect the most extreme form of gender discrimination that exists. Similar to the phenomenon of sex selection, violence against women and children demonstrates the pervasive nature of discriminatory gender norms and values through which violence is justified and perpetuated as an element of male/female relations. The section will first define domestic violence then will turn to a number of recent studies which highlight some of the threats of this violence to young child survival, health and nutrition.

Box 9 What is domestic violence?

There are many definitions of domestic violence used in the literature. Most commonly domestic violence occurs within the household, which has its roots in unequal power relations between men and women, and which manifests through sexual, physical and non-physical abuse (neglect and verbal abuse may also be defined as forms of violence). The term gender-based violence is used to refer more broadly to a range of violent behaviours within and outside the home, most often perpetrated against women by men, while intimate partner violence refers more specifically to violence between couples.

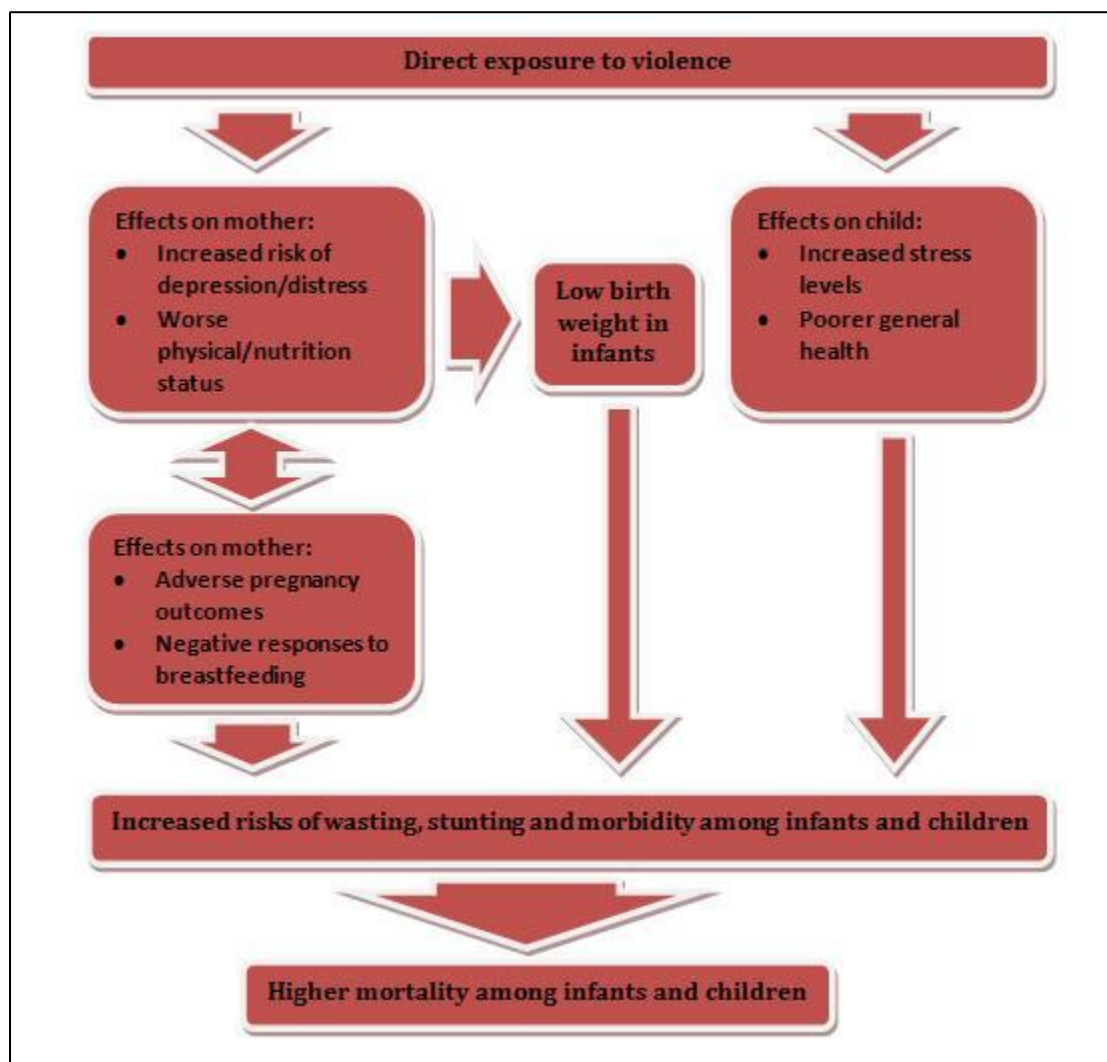
Research into the effects of violence on children has increased in recent years. This section draws largely on a recent review of the literature by Yount, DiGirolamo & Ramakrishnan which provides a range of evidence to demonstrate that domestic violence is detrimental to child survival (Yount, DiGirolamo & Ramakrishnan 2011). The review uses the term Children Exposed to Domestic Violence

(CEDV) which includes direct prenatal exposure and direct or indirect involvement meaning that the child may have experienced an altered environment in the womb due to violence against the mother, or been involved directly in witnessing or experiencing an assault, or been told of or heard about an assault second-hand (p. 1535). Although the studies referred to here may not have used this definition consistently, most nevertheless refer to direct prenatal exposure and direct involvement of the child in violence.

The majority of the studies included in the review are from high-income countries, however the following results are taken from studies included in the review but conducted in low and middle income contexts across Latin America, South Asia and Africa. The diagram below (Figure 3) summarises the evidence and provides a visual representation of the links between violence against mothers and increased risks to child survival, health and nutrition¹⁷.

¹⁷ There are of course multiple effects of violence that may impact on health, by increasing fear, disempowerment and other forms of social, psychological and emotional risks. This diagram details those which have been identified in the literature on effects of violence on child health and nutrition. The root causes of such violence are briefly discussed towards the end of the section and in Box 10.

FIGURE 4: DIAGRAM SUMMARISING EVIDENCE ON THE IMPACT OF DOMESTIC VIOLENCE ON WOMEN AND THEIR CHILDREN



The review found that there is evidence that **domestic child exposure to domestic violence increases risks to children's health and nutrition** although results were sometimes mixed. For example, out of two case control studies conducted in Latin America, one found an association between severe physical violence against mothers and the adjusted odds of wasting in children 1 – 24 months (weight-for-height z-score <-2 SD from reference median) (Hasselman & Reichenheim 2006) although another found no difference in Hb concentration¹⁸ or anthropometry in infants and 2 to 6 year-olds whose mothers experienced physical violence (Arcos, Uarac & Molina, 2003). Among two cross-sectional studies, one conducted in South Asia found that children (3-14 years) of mothers who had ever experienced physical violence consumed 294-394 fewer calories than those mothers who had not experienced physical violence (Rao 1998). While another, based on five national samples taken in African countries, found that out of those five, only children 6 – 59 months of Kenyan mothers exposed to physical and sexual

¹⁸ Low concentration of Hb (haemoglobin) is linked to anaemia and is linked to a number of risk factors for child health.

violence were at greater risk of stunting or severe stunting (Rico, Fenn, Abramksy & Watts 2010). However, a longitudinal nutrition experiment conducted in rural Bangladesh found that children born to mothers exposed to domestic violence had lower weight for age and height for age scores from birth to 24 months (Åsling-Monemi, Naved & Persson, 2009). **Overall these results provide evidence that in some contexts women's exposure to violence also has damaging consequences for their children's health and nutrition.**

The review by Yount, DiGirolamo & Ramakrishnan (2011) also examines the possible pathways through which these nutrition and health effects operate, although the authors point out that these are as yet understudied. Nevertheless there is evidence from a case control trial conducted in South Asia that children exposed to domestic violence or marital conflict had **higher stress levels** demonstrated by higher levels of salivary cortisol and plasma amino acids (Zhang et al. 2008). A number of studies conducted in Asia and Latin America have demonstrated various effects of domestic violence on **maternal mental health**¹⁹. A study undertaken in Nicaragua found that malnourished and distressed pregnant women more often have low birth weight children (Valladares et al. 2009), while studies in Vietnam, Pakistan and Ethiopia found that mothers' mental health status has a direct impact on their infants' weight and nutrition status (Deyessa et al. 2010; Harpham et al. 2005; Rahman et al. 2004). **Women's own physical and nutrition status** is affected by domestic violence, which in turn, impacts on a child's birth weight although the majority of the studies reviewed in this section of the review were conducted in high-income settings. However, in Uganda, Brazil and in Asia, studies have found associations between domestic violence and low maternal prenatal weight gain (Asling-Monemi et al. 2003; Kaye et al. 2006; Moraes, Amorim & Reichenheim 2006; Nunes et al. 2010; Valladares et al. 2002a; Yang et al. 2006). **Maternal risk behaviours** such as smoking or alcohol or drug use (which have been linked to poor child health outcomes) increased with exposure to domestic violence (Nunes et al. 2010; Quelopana, Champion & Salazar 2008).

Domestic violence has also been linked to **higher risks of obstetric complications** in Uganda (Kaye et al., 2006). A number of studies have found evidence that physical violence is linked to adverse pregnancy outcomes (Ahmed, Koenig & Stephenson 2006; Arcos et al. 2001; Ganatra, Coyaji & Rao 1998; Jejeebhoy 1998; Kaye et al. 2006; Nunes et al. 2010; Valladares et al. 2002b; Valladares et al. 2009). A study in Brazil also found that domestic violence in pregnancy impacted negatively on maternal responses to breastfeeding (Lourenco & Deslandes 2008).

Finally the review examines the evidence on domestic violence and morbidity and morbidity-related treatment and finds that studies have shown higher odds of respiratory infection in Chile and Bangladesh (Arcos, Uarac & Molina 2003; Silverman et al. 2009) and poorer general health in Uganda (Karamagi et al. 2007) among children exposed to domestic conflict.

The authors highlight **three major draw-backs** in the current research into child exposure to domestic violence revealed by the review:

- There is over-reliance in the field on data from higher-income contexts. One of the most obvious geographical gaps is in relation to African countries where very few studies have been carried out in this area up to now. The authors however point to the potential usefulness of DHS data in

¹⁹ See for example Valladares et al 2005, Varma et al 2007, Zareen et al 2009, Fisher et al 2010, Gomez-Beloz et al 2009, Karmaliani et al 2009, Nunes et al 2010, Leung et al 2002, Ludermit et al 2010, Tiwari et al 2008.

these contexts, where data has been collected on child anthropometry and domestic violence in over 30 low income countries;

- There is inconsistent measurement of domestic violence stemming from the use of diverse instruments and variables;
- There is inconsistency in research on children exposed to domestic violence in terms of the focus on older or mixed age groups of children and in terms of the attention paid only to a few outcomes or pathways as yet. The use of DHS data could help here too, to provide closer consistency between measurements, outcomes and pathways.

Another recent study on domestic violence not included in the review (but which provides another important insight into this issue) has used nationally representative data from India to estimate the risks for infant and child mortality based not only on their exposure to domestic violence (the study uses the term intimate partner violence) but also on their gender (Silverman et al. 2011). **The study found that not only were infants and young children at a greater risk of mortality in families where women experienced spousal violence, but that this risk was much greater for girls than boys.** Even when controlling for the lower female birth rate, girls' deaths accounted for 75% of all deaths related to intimate-partner violence. The authors offer a number of hypotheses to explain this shocking statistic, for example, that in contexts where there is strong gender bias (such as those discussed above) violence against wives may accompany a host of other forms of maltreatment of female members of the household, ranging from neglect in feeding or clothing, to the extreme of female infanticide. They also suggest that women who experience such violence may be less able to care for their children, especially in the circumstances in which they have given birth to a girl, where violence and abuse is likely to increase due to such gender bias (ibid.).

Box 10 Understanding the roots of domestic violence

Qualitative research can contribute to more in depth understanding about violence within households. For example four qualitative studies have explored the nexus of gender discrimination and malnutrition, affecting young married women in South Asia and impacting on the birth weight of their children. The studies demonstrate that violence against young married women reflects specific gender norms which allow violence as acceptable in order to resolve conflict, or as punishment for perceived mistakes (Sethuraman & Duvvury 2007). One of the studies shows that such gender norms are not uniform or static but vary between households which are more stringent in their expectations of young women and those which are more flexible. Women are more likely to experience violence when they are perceived to have failed in households with more rigid norms, while in those with more flexible norms they are more likely to receive support and mentoring in the early stages of marriage (Kapadia-Kundu et al. 2007).

This section has highlighted that:

- Domestic violence presents a considerable risk to the health and well-being of women and their children. Recent research on this issue has demonstrated that child exposure to domestic violence presents risks to child survival due to the following factors:
 - Considerable negative effects on maternal health, including increased risk of depression and malnutrition, which can contribute to adverse pregnancy outcomes and negative responses to breastfeeding;
 - Considerable negative effects on child health, including higher stress levels and increased risk of morbidity, as well as low birth weight linked to their mother's worse health during pregnancy and increased chances of stunting and wasting;
- In some contexts, domestic violence may be perceived as a legitimate form of 'punishment' especially where gender norms about women's and men's roles are particularly rigid.

2 GENDER-SENSITIVE INTERVENTIONS ADDRESSING CHILD HEALTH AND NUTRITION

Introduction

This section addresses the question “Which approaches to addressing the impact of gender inequalities, roles and relations on young child survival have been assessed and with what results?” as outlined in the introduction to this document. In order to achieve this, we have reviewed evaluations of interventions which have used an aspect of gender-awareness in their intervention design with the aim of addressing issues around child health and nutrition.

As highlighted in the methods section we conducted an extensive search using a number of databases and hand searching journal issues as well as contacting 42 gender and health experts and accessing over 20 websites to ensure we had covered academic and ‘grey’, non-academic literature. Despite using this combination of methods we have identified only 4 evaluated interventions, plus a review of 20 conditional and non-conditional cash-transfer programmes (see Annex I for a table summarizing these evaluations and their findings). While there are important examples of evaluations of interventions which have encompassed aspects of gender in relation to maternal and reproductive health, more needs to be done to plan and evaluate gender dimensions of child health and nutrition initiatives.

The following sections explore these interventions in three categories: first, those addressing service delivery; second, those addressing community participation; and third, those beyond the realm of health and nutrition programmes, addressing social protection and financial inclusion (e.g. cash transfers and micro-credit schemes). It is important to note that although most of the interventions identified do not explicitly refer to the concept of gender in their description of their activities, they have been included because their approach implicitly addresses dimensions of gender explored in the review.

2.1 ADDRESSING SERVICE DELIVERY

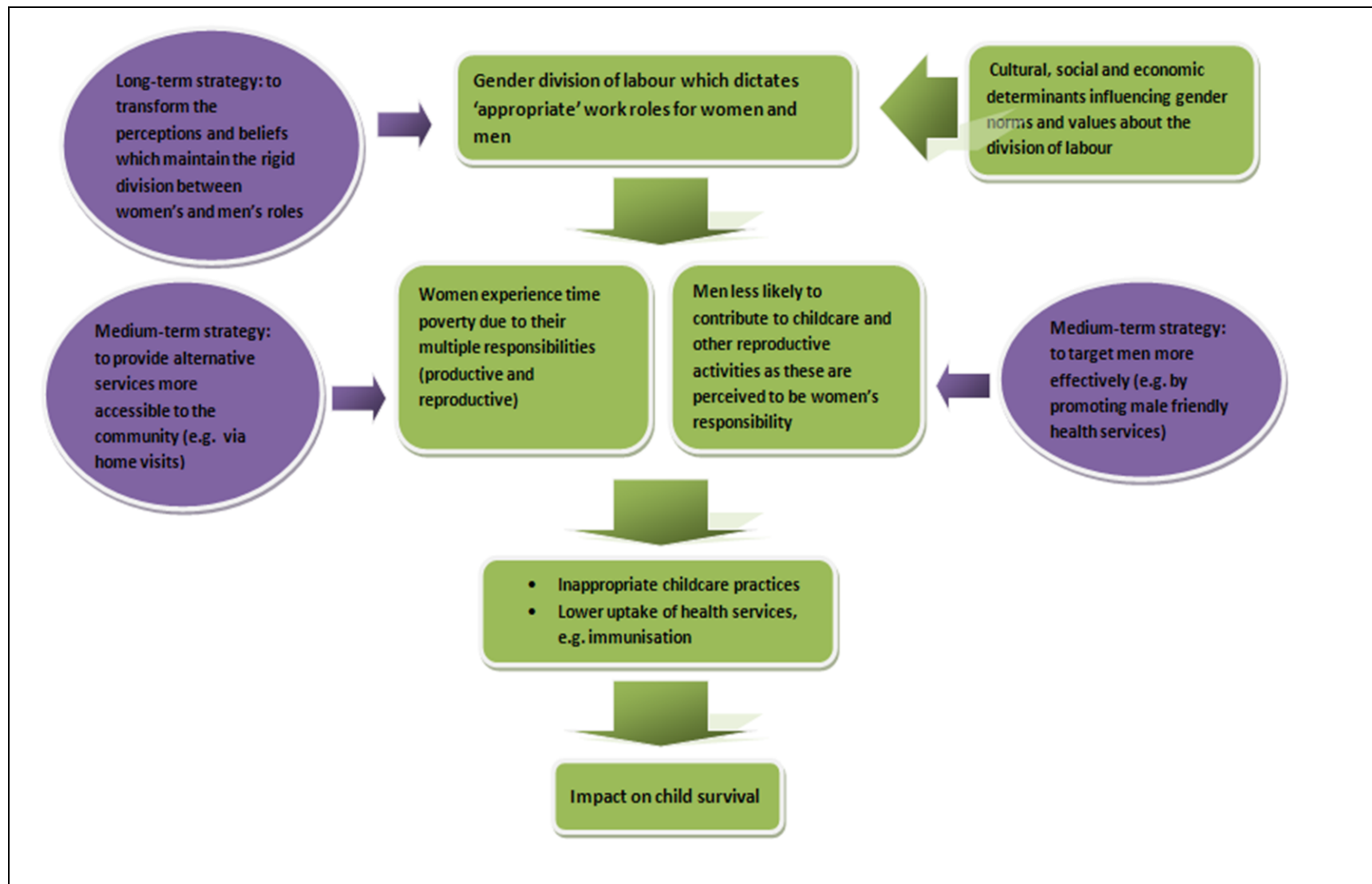
Service delivery through facility-based services produces considerable barriers that are gendered and structural and relate to women’s freedom to travel, the distance they might be required to travel and the costs incurred through user fees. Furthermore, facilities are not always male-friendly and may place emphasis on women to attend, thus discouraging parents to share responsibility for accessing healthcare for their children.

There are other issues in expecting women to use facility-based services. As seen in section 1.3.1 of the review, one of the problems with encouraging women to engage in paid labour through microcredit schemes lies in the potential for such ‘extra’ work to impede on women’s already tight schedules. This potential clash of ‘benefits’; one being increased income for women and their families; the other being their access of healthcare provision for their children; may be addressed through the provision of such healthcare services at more appropriate times or in more appropriate places for women and their families.

For example, Faruquee and Johnson (1982) found that home visits were an important element of the success of an integrated nutrition, healthcare and family planning project in Punjab, India (the Narangwal project). **Not only were home visits useful for increasing overall usage, they also reported that increased outreach was particularly useful in addressing the needs of high-risk populations, and that use of services by low income groups rose with greater intensity of home visits.** Where home visits for family planning and child care services were monthly, fewer low-caste families were reached and reductions in neonatal mortality were moderate and mainly in the high-caste group. However where such visits were weekly, neonatal deaths were reduced most for low-caste groups (Faruquee & Johnson 1982).

There are opportunities for community-based interventions to challenge and address underlying gender inequities embedded in the fabric of the community. Nevertheless they can also serve to reinforce gender norms and values if they focus only on women. It is important then for such interventions to take particular care in analysing the gender context and building in appropriate action with different members the household. The diagram below illustrates different strategies for addressing this issue, taking as its starting point, the gender dimension of women's and men's different roles and responsibilities. This diagram shows that there are opportunities for medium and long term strategies to improve child health outcomes by addressing this gender issue.

FIGURE 5: DIAGRAM DEPICTING THE RELATIONSHIP BETWEEN GENDER DIVISIONS OF LABOUR AND CHILD SURVIVAL AND POTENTIAL STRATEGIES FOR POLICY AND SERVICE ENGAGEMENT



2.2 ADDRESSING COMMUNITY PARTICIPATION

The review has demonstrated that health service users face multiple barriers to facility care, some of which are specifically linked to dimensions of gender. As the diagram above demonstrates, women experience time poverty due to their heavier burden of 'reproductive' care, which is often coupled with other duties such as paid employment inside or outside the home. On the other hand men may feel discouraged to attend facilities with young children as communities and the facilities themselves often view maternal and child health care as a purely 'female' domain. Beyond these gender-related factors, poor and isolated communities suffer through lack of access to primary health care facilities and lack of transport or, indeed, financial resources, to travel to distant facilities. In turn, women's lack of financial independence and lack of freedom to travel may exacerbate these factors further. Communities may benefit then from health services that are delivered through more accessible and sustainable mechanisms and that seek to engage community members within their local contexts. Outlined below are two examples of projects which have sought to engage with communities through participatory methods.

A cluster-randomised trial of a participatory learning and action cycle found positive child survival outcomes for this type of intervention, which focused on mobilizing women's groups in Jharkand and Orissa, eastern India (Rath et al. 2010). The intervention was carried out in 18 cluster sites, 12 of which were in isolated rural communities, where newborn health outcomes were particularly poor. In these communities women have little access to primary health care facilities and delivered in 80% of cases, without a skilled birth attendant. The intervention involved 20 meetings with women's groups based on participatory learning and action methods. The intervention sought to address supply-side and demand-side issues by combining learning activities such as participatory games and strategies with strategies to address health funds, stretcher schemes, production and distribution of clean delivery kits, and home visits.

The intervention led to a 45% reduction in neonatal mortality in the last two years of the intervention, which the study was largely due to improvements in safe practices for home deliveries. The authors hypothesised that this improvement was based on the following six interrelated factors: (1) acceptability; (2) a participatory approach to the development of knowledge, skills and 'critical consciousness'; (3) community involvement beyond the groups; (4) a focus on marginalised communities; (5) the active recruitment of newly pregnant women into groups; (6) high population coverage.

An important aspect of the intervention's success was that other members of the community became involved in the groups throughout its implementation, leading to broader learning and engagement with other households members such as husbands and adolescent girls or unmarried women thus reinforcing learning more widely. However the authors point out this broader engagement was at times challenging, when facilitators had to address sensitive topics in the presence of men, for example.

Aubel et al. (2004) provide an evaluation of an intervention focused on grandmothers' involvement in improving maternal and child nutrition (Aubel, Touré & Diagne 2004). The authors usefully identify ways in which grandmothers have been left out of the equation in mother and child health programming, due to perceptions that they are not influential in household decision-making, or that they are associated with 'traditional' remedies considered harmful, or that they are incapable of

changing and adapting to new knowledge and practices. Although they demonstrate ways in which traditional maternal and child health approaches have ignored household dynamics in the production of health, the authors do not critique this from a gender perspective which would add an important dimension to this issue. As this review has shown there is evidence to suggest that older women in households may have positive and negative effects on child health and nutrition through their powerful influence on decision-making and access to and control of resources in the household.

The findings of the Aubel's study, which conducted interviews at the beginning and at one year into the intervention found not only that grandmothers' knowledge had improved, but that women's practices had significantly changed in the intervention villages as compared to the control villages, where nutrition education was being carried out without the grandmother participation project.

The quantitative results demonstrate that there were significant improvements in women's nutrition practices during pregnancy and in feeding practices of newborns. In intervention villages 98% of mothers reported initiating breast-feeding within the first hour and 96% reported exclusively breastfeeding their last child for five months (compared to 57% and 35% of mothers in control villages, respectively). Qualitative findings demonstrated that the pathways of change were linked into the positive roles played by grandmothers in encouraging them to eat 'special' foods, to decrease their work-load and to exclusively breastfeed for the first 6 months.

Although the study does not explore gender issues explicitly, the authors highlight the importance of the **participatory aspects of the grandmother intervention** which was based on an action research model and included the grandmothers in 'constructivist' forms of learning, through songs and problem-posing 'stories-without-end' and other group activities. Grandmothers themselves reported feeling empowered by the intervention through their heightened sense of self-esteem and improved knowledge and increased interest in maternal and child nutrition.

Given that the review has continually highlighted the intra-household nature of decision-making and the influence (both positive and negative) of senior household members, in particular mothers-in-law, this study provides a powerful analysis of an intervention which takes into account this aspect of maternal and child nutrition and demonstrates the value of addressing inappropriate practices through including senior female household members.

2.3 ADDRESSING SOCIAL PROTECTION AND FINANCIAL INCLUSION

The review highlighted a number of ways in which women's reduced access to and control of resources can impact on child health outcomes. Over the past decades there have been attempts to place more economic resources in the hands of women, often targeting mothers. As with participatory approaches, the rationale for such attempts has drawn largely on arguments that the empowerment of women will have broader consequences for their families and for society in general. Micro-credit schemes and cash transfer programmes have been developed and implemented widely across low and middle income countries following this rationale.

Micro-credit schemes have become a popular development tool traditionally involving the targeting of small 'micro' loans to groups of women who are then expected to use their loans to develop small businesses that can improve their livelihoods and so have a lasting effect on their families. The concept of micro-loans to women was originally conceived as a form of gender empowerment but

schemes differ widely as to their gender-awareness and sensitivity. When such schemes have been evaluated from a gender perspective there have been some interesting findings: for example in India evaluations have found that where the schemes have been more successful, male earners have 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). Women have also reported greater levels of violence, where tensions have arisen in the home due to their improved economic situation, especially where schemes have excluded men (ibid).

A randomised control trial carried out in Peru was based on the hypothesis that microcredit clients participating in the health education component of the programme, would gain knowledge of child health issues which would translate into positive health outcomes for their children (Hamad, Fernald & Karlan 2011). The intervention being evaluated was an Integrated Management of Child Illness (IMCI) based health education programme among clients of a micro-credit scheme in Peru. The authors point out that the study is “novel in investigating the effect of IMCI in the setting of an economic intervention, in which the potentially increased income and empowerment provided by the microcredit may increase clients’ ability to act on the information gleaned from the educational sessions.” (p. 2). They also hypothesised that the effects would be greater among women and their children, as female clients have been previously shown to invest more in their children than male clients.

While the study found that parents’ knowledge improved following the intervention, child anthropometric status remained unchanged. The only significant difference noted was among clients whose loan officer was considered more highly skilled in delivering the education sessions. In this category, children had lower levels of bloody diarrhoea. The study concludes that factors such as the relative higher levels of knowledge already present in the client population and the fact that health infrastructure had not changed, may explain the lack of positive results. However they do stress the importance of conducting further studies in other contexts as microcredit is considered to be a particularly strong method of delivering interventions, a claim which requires further testing.

A recent review of 20 world-wide cash transfer programmes was recently undertaken focusing on the potential of cash transfers to protect education, health and nutrition (Adato & Bassett 2009). The review looks at 10 conditional and 10 unconditional programmes. Conditional programmes are those which place certain restrictions on the way cash is disbursed and may require attendance by mothers at clinics or attendance by their children at school, for example. Although the review does not focus specifically on gender, cash transfer programmes have been developed using a similar rationale to micro-credit schemes, with the objective of improving family health through directing economic resources to mothers.

The review provides considerable evidence for both conditional and unconditional programmes to improve health-seeking behavior for children, e.g. participation in growth monitoring and promotion and attendance at prenatal clinics and participation in preventative health-care visits. These improvements have been attributed to the fact that cash transfers cover costs directly associated with accessing health care as well as providing incentives for participation in health care and education. Non conditional cash transfers were found to be particularly linked to improvements in nutrition which in turn impacts on health.

As with micro-credit schemes there are strengths and weaknesses to this approach. The review suggests that overall cash transfer schemes offer the best strategy for providing country-wide social protection

which successfully targets the most vulnerable households. In addition, there is also the potential for these programmes to challenge and address issues of violence. For example a Save the Children cash-transfer programme in Zimbabwe that allocated transfers to women has not led to increased violence and in fact has had a positive impact on household dynamics, improving communication and joint decision-making between husbands and wives (Save the Children UK 2011).

CONCLUSION

As we have seen there is paucity of evaluations of gender-sensitive interventions to address aspects of child health and nutrition. However there are examples of impacts on social issues that are known to contribute to child health and nutrition outcomes, for example the IMAGE project in South Africa evaluated the impact of a gender-sensitive intervention on both gender-based violence and HIV and found that community-based activities led to a significant reduction in the risk of physical or sexual violence by an intimate partner (Kim et al. 2007)²⁰. There is a need to document gender-sensitive interventions on child health and nutrition and to make links between other interventions aimed at improving gender-equity in health (e.g. addressing violence) and specific child health outcomes.

²⁰ The IMAGE trial was designed as a randomised trial and included participatory methods designed to engage the community in challenging and addressing behaviours and attitudes leading to HIV and gender-based violence. The results of the trial show that the community-based activities led to 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 abuse relationships and raise awareness about violence within their communities (Kim et al., 2007).

Key messages on gender-sensitive interventions addressing child health and nutrition

- There are very few examples of evaluated gender-sensitive interventions that explicitly aim to impact young child survival, health and nutrition;
- Addressing modes of service delivery must involve making services more accessible to carers of children; interventions which have included a focus on accessing households directly through home visits or that address barriers to reaching facilities and seek to mobilize and engage communities have been effective in improving child health and nutrition outcomes;
- Interventions have also demonstrated the benefits of including senior females, such as grandmothers in improving attitudes and practices regarding infant nutrition;
- Beyond the realm of child health and nutrition programming, interventions addressing women's financial struggles, through cash transfers and micro credit schemes have shown benefits for child health and nutrition but these kinds of initiatives need careful planning and monitoring to avoid negative consequences such as the reinforcing of gender norms and gender-based violence;
- Overall the review of interventions demonstrates that there are benefits to be reaped by designing programmes that use gender-sensitive approaches to address child survival, health and nutrition.
- There is a need to document gender-sensitive interventions on child health and nutrition and to make links between other interventions aimed at improving gender-equity in health (e.g. addressing violence) and specific child health outcomes.

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ANNEX I: EVALUATIONS OF GENDER-SENSITIVE INTERVENTIONS

We identified only 5 evaluated interventions (combining a gender element with clear outcomes for child health or nutrition) plus a review of 20 conditional and non-conditional cash-transfer programmes.

EVALUATIONS IDENTIFIED				
Study name	Author(s), year	Publisher details	Intervention type	Evaluation findings
Health, Nutrition, and Family Planning in India: A Survey of Experiments and Special Projects	Faruquee & Johnson (1982)	World Bank Staff Working Paper No. 507	The Narangwal Nutrition Project	<ul style="list-style-type: none"> Regular house-to-house visits were found to be important in the early recognition and care of illnesses and malnutrition. Home visiting was also effective both in reaching target groups and in providing services to meet basic needs. Greater implementation of home visits led to greater uptake of services by low-income groups and lower rates of neonatal mortality among low-caste children.
Senegalese grandmothers promote improved maternal and child nutrition practices: the guardians of tradition are not averse to change	Aubel, Touré & Diagne (2004)	Social Science and Medicine 59 (5): 945-959	The Grandmother Project	<ul style="list-style-type: none"> In intervention villages 98% of mothers reported initiating breast-feeding within the first hour and 96% reported exclusively breastfeeding their last child for five months (compared to 57% and 35% of mothers in control villages, respectively) Qualitative findings demonstrated that the pathways of change were linked into the positive roles played by grandmothers in encouraging them to eat 'special' foods, to decrease their work-load and to exclusively breastfeed for the first 5 months.
Explaining the impact of a women's group led community	Rath, Nair, Tripathy, Barnett, Rath, Mahapatra, Gope, Bajpai, Sinha, Costello, &	BMC International Health and Human Rights 10	Cluster-randomised trial	<ul style="list-style-type: none"> The intervention led to a 45% reduction in neonatal mortality in the last two years of the intervention, which the study was largely due to

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mobilisation intervention on maternal and newborn health outcomes: the Ekjut trial process evaluation	Prost (2010)			improvements in safe practices for home deliveries.
Health education for microcredit clients in Peru: a randomized controlled trial	Hamad, Fernald & Karlan (2011)	BMC Public Health 2011 11 : 51	Integrated Management of Childhood Illness (IMCI) Project among clients of PRISMA (microcredit organisation in Peru)	<ul style="list-style-type: none"> • The study found that parents' knowledge improved following the intervention BUT child anthropometric status remained unchanged. • The only significant difference noted was among clients whose loan officer was considered more highly skilled in delivering the education sessions. In this category, children had lower levels of bloody diarrhoea.
REVIEWS IDENTIFIED				
Social protection to support vulnerable children and families: the potential of cash transfers to protect education, health and nutrition	Adato & Bassett (2009)	AIDS Care 21 (S1) 60-75	Review of 10 conditional and 10 unconditional cash transfer programmes	<p>A number of the programmes reviewed showed positive outcomes of conditional and unconditional cash transfers:</p> <ul style="list-style-type: none"> • In health-seeking behaviour for children (i.e. participation in growth monitoring promotion and attendance at prenatal clinics and participation in preventative health-care visits) • Non conditional cash transfers were found to be particularly linked to improvements in nutrition

ANNEX II: GENDER AND HEALTH/CHILD HEALTH EXPERTS CONTACTED *(the date of contact refers to the date upon which a reply was received from the relevant person/people)*

Gender/Child health expert	Organisation	Data of contact
Ila Fazio	Effective Intervention	17/05/2011
Rene Loewenson	Training and Research Support Centre	17/05/2011
Korrie de Koning	Royal Tropical Institute, Netherlands	17/05/2011
Louis Paluku Sabuni	The Leprosy Mission International	17/05/2011
Katie Bristow	Liverpool University	17/05/2011
Francelina Romao	Ministry of Health (Mozambique)	17/05/2011
Claudia Garcia-Moreno	World Health Organisation	17/05/2011
Lidia Farre	Universidad de Alicante	17/05/2011
Elizabeth Tolley, Peggy Bentley, Rose Wilcher, Donna McCarraher, Michelle Lanham	Family Health International	17/05/2011 – 18/05/2011
Christobel Chakwana	Southern African Development Community	18/05/2011
Caroline Sweetman	Oxfam	18/05/2011
Janet Seeley	University of East Anglia	18/05/2011
Catherine Locke	University of East Anglia	18/05/2011
Jasmine Gideon	Birkbeck College, University of London	18/05/2011
Laura Camfield	Young Lives	18/05/2011
Valli Yanni	Independent Consultant	18/05/2011
Cheryl Doss	Yale University	19/05/2011
Beryl Leach	Panos Institute	19/05/2011
Evelien Kamminga	Royal Tropical Institute, Netherlands	19/05/2011
Paul Dornan	Young Lives	20/05/2011
Nduku Kilonzo	Liverpool VCT and Care	23/05/2011
Sassy Molyneux	KEMRI, Wellcome Trust Research Programme	24/05/2011
Kelly Muraya	KEMRI, Wellcome Trust Research Programme	31/05/2011
Tom Barton	Creative Research and Evaluation Centre	02/06/2011
Janet Price	Independent Consultant	13/06/2011
Lakshmi Menon	World Alliance on Breastfeeding Action	14/06/2011
Renu Khanna	SAHAJ Baroda, India	14/06/2011
Radhika Chandiramani	Talking about Sexual Health and Reproductive Issues (TARSHI)	14/06/2011
Shubhada Kanani	University of Baroda, India	15/06/2011
Hilary Standing	Institute of Development Studies	16/06/2011
Jessica Espey	Save the Children Fund	20/06/2011
Anuj Kapilashrami	Edinburgh University	22/06/2011
Nancy Gerein	National Health Sector Support Programme, Nepal	29/06/2011
Mohga Kamal-Yanni	Oxfam	29/06/2011
Alice Welbourn	Salamander Trust	14/07/2011
Helen Derbyshire	Independent Consultant	14/07/2011
Sabina Rashid	BRAC	14/07/2011
Judi Aubel	The Grandmother Project	07/09/2011

**ANNEX III: WEBSITES ACCESSED FOR INFORMATION ABOUT GENDER AND
CHILD HEALTH AND NUTRITION**

Organisation	Date Accessed
ELDIS	12/05/2011
World Bank	12/05/2011
UNAIDS	17/05/2011
UNFPA	17/05/2011
UNICEF	18/05/2011
UNIFEM	20/05/2011
UN Women	20/05/2011
Save the Children Fund	23/05/2011
Action Aid	23/05/2011
Oxfam	25/05/2011
Family Health International	25/05/2011
Plan International	25/05/2011
NORAD	01/06/2011
Swedish SIDA	01/06/2011
Canadian SIDA	01/06/2011
USAID	02/06/2011
DFID	03/06/2011
Netherlands Development Organisation	03/06/2011
PATH	07/06/2011
The Salamander Trust	07/06/2011