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Gender-Inclusive Nutrition Activities in South Asia

Volume II: Lessons From Global Experiences

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LIST OF ACRONYMS

ACC/SCN	Administrative Committee on Coordination/Sub-Committee on Nutrition (UN)
AED	Academy for Educational Development
AGETIP	Agence d'Exécution des Travaux d'Intérêt Public
ASAP	A Self-Help Assistance Project
BASICS	Basic Support for Institutionalizing Child Survival
BCC	Behavior Change Communication
BFCI	Baby-Friendly Community Initiative
BFHI	Baby-Friendly Hospital Initiative
BFP	Bolsa Familia Program
BIDS	Bangladesh Institute of Development Studies
BINP	Bangladesh Integrated Nutrition Project
CANEF	Centre d'Appui Nutritionnel et Economique aux Femmes
CCF	Children's Christian Fund
CCGA	Chicago Council on Global Affairs
CCT	Conditional Cash Transfer
CNC	Community Nutrition Centers
CNP	Community Nutrition Program
CRECER	Crédito con Educación Rural
CRS	Catholic Relief Services
CWE	Credit with Education
DANA	French acronym for Food and Applied Nutrition Directorate
DFID	Department for International Development
DHS	Demographic and Health Survey
ELA	Employment and Livelihood for Adolescents
EBF	Exclusive Breast Feeding
FANTA	Food and Nutrition Technical Assistance Project
FAO	Food and Agriculture Organization of the United Nations
FFA	Food for Asset Creation
FFH	Freedom from Hunger
GINI	Gender-Inclusive Nutrition Interventions
GMP	Growth Monitoring Programs
HAZ	Height for Age
HFPP	Homestead Food Production Program
HKI	Helen Keller International
ICDS	Integrated Child Development Services
ICRW	International Center for Research on Women

IFPRI	International Food Policy Research Institute
IGA	Income Generating Activities
IMCI	Integrated Management of Childhood Illness
INACG	International Nutritional Anemia Consultative Group
INE	Intensive Nutrition Education
INGO	International Non-Governmental Organizations
IVACG	International Vitamin A Consultative Group
JFFLS	Junior Farmer Field and Life Schools
LBW	Low Birth Weight
MCH	Maternal and Child Health
MNHC	Maternal Nutrition and Health Care
NCAER	National Council of Applied Economic Research
NICHD	National Institute of Child Health and Human Development
NIH	National Institute of Health
NNE	Non-intensive Nutrition Education
NTAE	Non-traditional Agricultural Export
ONASA	French acronym for National Bureau for Food Security Support
ORAP	Organization of Rural Associations for Progress
OSA	Out-of-School Adolescent
OVC	Orphans and Vulnerable Children
OXFAM	Oxford Committee for Famine Relief
PILSA	French acronym for Community Based Food Security Project
PROCAMPO	Program for Direct Payments to the Countryside
PROGRESA	National Program for Education, Health and Nutrition
PSM	Propensity Score Matching
RMP	Road Maintenance Program
SAR	Staff Appraisal Report
SHG	Self-Help Groups
SHPI	Self-Help Promoting Institutions
SILC	Savings and Internal Lending Communities
UNCF	United Nations Children's Fund
USAID	United States Agency for International Development
VGD	Vulnerable Group Development
VSL	Village Savings & Loan
WAZ	Weight for age
WFP	World Food Programme
WHO	World Health Organization
WRC	World Relief Corporation

EXECUTIVE SUMMARY

Though South Asia has experienced high economic growth during the last decade, it has the world's highest rates of undernourished children – a gap known as the “South Asian Enigma.” (World Bank 2011). Forty-two percent of all South Asian children under five are underweight, compared with 23 percent in West and Central Africa, the second worst region for malnutrition (UNICEF 2012). Evidence suggests that gender, particularly women's status, is an important factor in nutrition in South Asia, where women's low position and high levels of malnutrition exacerbate children's nutrition problems. Researchers have asserted that malnutrition would drop 13 percent if gender equity were attained there (Smith et al. 2003).

This paper examines promising approaches from a wide array of literatures to improve gender-inclusive nutrition interventions in South Asia. It is the second of a series on gender and nutrition in South Asia. The first paper explored why gender matters for undernutrition in the region and conducted a mapping of regional nutrition initiatives to find that gender is too narrowly addressed in most programs if at all.¹ Adequately addressing gender² requires nutrition programs to focus not only on health services and information for the mother and her children, but also on her autonomy and the support she receives from her partner, other household members, and the broader community. This focus is especially important for adolescent mothers in the region, who have very low status. The present study drew from the conceptual framework of the previous paper and investigated four types of innovations in nutrition initiatives that address gender. These entail promoting: (1) women's household autonomy; (2) household support for the woman and her own and her children's nutrition; (3) community support for the woman and her own and her children's nutrition; and (4) help for adolescent girls.

Women's household autonomy is the most important conceptually and empirically. The evidence indicates that it rises with their level of economic empowerment. Programs that put income under women's control increase their position and autonomy in the household. Further, empirical evidence indicates that women disproportionately devote income they control to their children's nutrition, health and education, i.e., human capital. The problem is control. Women's status is low in most of South Asia, so they may not be able to maintain control of income earned in, say, an integrated nutrition intervention. Therefore, it may not accomplish its intended aim. Even if the women learned about better nutrition for themselves and their children, they might not be able to apply that knowledge if they don't have income they can spend as they see fit.

Next, support from household members to whom a woman is subordinate—her husband and father-in-law as well as her mother-in-law—is essential. Ideally, interventions should give these relatives incentives to increase their understanding (a) of the importance of nutrition for the woman herself as well as for her children, (b) of the value of specific nutritional practices

¹ The first paper, titled, Gender-Inclusive Nutrition Activities in South Asia: Mapping Report (Sen and Hook 2012), can be downloaded from <https://openknowledge.worldbank.org/handle/10986/11904>.

² Gender refers to the socially constructed and learned female and male roles, behaviors and expectations which translate biological differences between men and women (usually termed “sex”) into social norms that define appropriate activities, rights, resources and power (World Bank 2011: 46).

and nutrients, and (c) that any income she earns is likely to be spent on her children's nutrition and well-being. Such comprehension should make them more willing to promote mother/child nutrition while permitting the woman to earn and control income.

Third, involving the community to support women's earning and control of income as well as their and their children's nutritional needs could lead to a sizeable reduction in female and child malnutrition in South Asia. Most community-focused efforts typically utilize volunteers and involve information campaigns and other initiatives that are rather narrowly focused on nutrition. Broadening the volunteers to include groups of grandmothers and some men could increase incentives for older women and additional men to join their community's efforts. Broadening the interventions beyond traditional nutrition information campaigns to include economic empowerment for women should improve their efficacy. In an optimal gender-integrated approach, (a) raising women's economic empowerment and autonomy would be seen as just as important as (b) targeting information to them about better nutritional practices, and (c) enlisting both their household and community's support to achieve these objectives, while (d) spreading BCC about good mother/child nutrition practices.

Finally, targeting adolescent girls is crucial if the "South Asian enigma" of widespread female and child malnutrition, despite rapid economic growth, is to be solved – yet it is very rare. Many teen girls are underweight and undernourished, out of school but not earning income – a path leading to early marriage and early, precarious, motherhood. Two types of interventions could make a difference: (a) keeping them in school (where they can learn about nutrition), mainly by providing incentives to their parents, and (b) training them in income-generating activities (perhaps with access to microcredit) so their parents could benefit economically from keeping them at home longer. Parents seeing their daughters as assets, not liabilities, might improve their nutrition, too.

Findings

None of the cases reviewed for this paper encompassed all four aspects of the conceptual framework, but the literature review revealed some promising approaches that could be incorporated into future pilot projects in South Asia. These might be undertaken by the World Bank and those health ministries or NGOs willing to try more broadly focused nutrition efforts. Examining studies from many nations (see Appendix 5) led to some relevant findings:

Collectively, the studies make a solid case for increasing women's income – and, more importantly, their control of that income – as a key way of dealing with the root causes of malnutrition among South Asian young women and their infants and small children. One of the most promising is the Homestead Food Production model of Helen Keller International. Evaluations found that the gardens yielded healthy, micronutrient-rich vegetables, fruits and occasional protein sources to the women and women's groups that cultivated them. And in a four-country assessment, those gardens also led to more power for the women. Almost three-quarters of respondents said that they managed their homestead garden and controlled the spending of the income it generated from sale of surplus production. Other studies (e.g., Alam 2012, Meizen-Dick et al. 2011) show how income channeled to women increases spending on child health and nutrition.

Findings also underscore the importance of including the primary decision-makers in most South Asian households, men and paternal grandmothers, in initiatives aimed at decreasing the malnutrition of women, infants and young children (Adato et al. 2011).

Women who have learned better eating practices for their children and themselves from nutrition programs may have limited autonomy to adopt those practices, especially if they are without income. So far, few interventions have reached out to the main household decision-makers but results have been quite positive where it has happened, especially with respect to grandmothers: In a Senegal project, they were transformed from tradition-minded obstructionists of mother-child nutrition initiatives to enthusiastic advocates via programs that trained them, organized them into volunteer groups and enlivened and enriched their lives by their new-found mission (Aubel et al. 2011). There also was a promising radio drama approach to men in Mali, with the star of a popular show initially recalcitrant about his provider responsibility for the nutrition of the women and children in his household (see Parlato and Seidel1998).

The literature review found growing popularity of, and usually positive impact from, community-level health volunteers. Recruiting generally unpaid (and mostly female) volunteer nutrition workers to implement a rich array of nutrition interventions in local communities has had an impact. A pioneer effort was The Gambia's Baby-Friendly Community Initiative. There, volunteer groups of five women (including the traditional birth attendant) and two men created their own methods – from home visits to songs and dramas – to encourage young couples and the whole village to change entrenched and sometimes harmful traditional attitudes and practices. They achieved spectacular success (e.g., 99.8 percent of women initiated breastfeeding within the first 24 hours after delivery; see Semega-Jannah 1998). But the literature review also encountered only two efforts aimed at counteracting traditionalist attitudes and behavior that constrain the education, income and life chances of a community's young women and teen girls.

Concerning adolescent girls, a few interventions or studies found in the review showed that there are ways to target adolescent girls and also to win over their parents and community. Successful programs had to overcome traditionalists' fears about activities outside the house for teen-aged girls. The most successful initiative was the BRAC ELA (Employment and Livelihood for Adolescents) Centers in Bangladesh. They offered adolescent girls training in income-generating activities (IGA), access to credit, knowledge about health and other useful topics, as well as books, games and their own social space. And ELA management proved just as skilled in winning community support for this very nontraditional program (Shahnaz and Karim 2008).

Conclusions

Though the ideal “gender-inclusive nutrition interventions” package (GINI for short) was never found, based on the findings of this review, it can be described. Indeed, it is quite consonant with this study's conceptual framework. The most effective programs would encompass the following “success factors”: (a) ensure that the targeted women not only earn but control income (as in the HKI homestead garden projects in Bangladesh, Nepal and Cambodia); (b) get the powerful members of young married women's households – men and paternal grandmothers – on board by means of peer advocacy and community-oriented programs that (c) provide them with information on nutrition and women's child welfare-focused spending

patterns, (d) as well as (small) incentives so they don't seize control of income or marketable food generated by those women. These programs also would (e) train forward-looking local women (including grandmothers) and men for volunteer roles (preferably with small incentives for sustainability). (f) They would provide BCC on nutrition and help increase support by community leaders, religious figures and members for young women's livelihoods as well as mother/child nutrition. (g) Finally, the ideal GINI would also target teen girls, offering them nutrition information, along with incentives to parents to keep them in school and programs for the girls to earn money. Positive examples encountered in the literature are presented below (along with some partial successes that need further refinement). If polished and scaled up, such programs could put a big dent in the "South Asian Enigma" and both the gender inequities and malnutrition that define it.

The main conclusion is that the findings of this review make the case that GINI in South Asia also should promote women's economic empowerment and autonomy, specifically by increasing income under women's control. This, in turn, could greatly enhance women's household decision-making power, mobility and control over fertility, while reducing violence against them. Also, more could be done to soften traditional attitudes and get communities to support giving women greater access to and control of income as a way to benefit children, families and the community. Both program management and trained volunteers could be involved. This is in line with the World Bank's (2012) advocacy of awareness campaigns and information sharing as ways of easing social norms that constrain women's agency.

The most innovative, promising interventions proved to be more comprehensive than traditional MCH programs. They include outreach to others in the household (men or paternal grandmothers), and mobilizing community volunteers to promote good nutrition for both women and their children. Now the challenge is to create a truly integrated approach that combines all of these with a new focus on empowering the young women themselves. Presently, however, beyond making women and children the target population, few mainstream nutrition interventions showed understanding of the gendered dimension of malnutrition.

Some of the most innovative solutions presented in this report are bottom-up interventions stressing community and volunteer involvement (e.g., Semega-Jannah 1998; Aubel et al. 2001). Most of these interventions have the potential to be scaled up so that they can continue to tap the often enthusiastic services of volunteers – but in a non-exploitive, sustainable way.

These principles apply to aid to adolescent girls, but a key difference is that interventions must begin with strong efforts to keep girls in school. This is the first step in reducing early marriage, a causal factor in underweight, too-young mothers having high proportions of medically challenged low birth weight babies. A second step would promote income-earning for teen girls, a known parental disincentive for early marriage, since it transforms daughters from perceived liabilities to assets.

Recommendations

It is recommended that additional analytical work be undertaken to further explore the evidence that supports these possible interventions and their conceptual foundations. For

those that are robust, small, pilot projects should then be undertaken in South Asia by the World Bank, initially in at least two geographic areas varying in their level of gender inequality, to test these conclusions. Partners could be NGOs or willing health ministries.

As part of “gender-inclusive nutrition interventions,” promote income for women, e.g., via homestead gardens or through ties with entities (such as microfinance organizations) already involved in these efforts – and also promote ways to ensure that women can control their income.

Use volunteers to reach out to household decision-makers – men and paternal grandmothers – with messages about both better nutrition practices for mother and child and the need for the mother to have income she can use to enhance infant and child nutrition. Using forward-looking men and, especially, grandmothers as volunteers would magnify such interventions’ impact. Further, use community volunteers as well as NGO staffs to help change traditionalist attitudes toward (a) nutrition, (b) females earning and controlling income, and (c) education for teen girls.

For adolescent girls, bolster parental support for their staying in school by (a) providing small incentives to parents, and (b) making the schools more suitable for teen girls by adopting a useful intervention from World Bank girls’ education projects: making separate latrines for girls with lockable doors, safely enclosed by a “modesty wall.” (c) Also, promote skills training, access to credit and income-generation to make girls assets for parents, to discourage early marriage and provide teens with after marriage income – that might also delay high-risk, too-young pregnancy.

GENDER-INCLUSIVE NUTRITION INTERVENTIONS: LESSONS FROM GLOBAL EXPERIENCES FOR SOUTH ASIA

A. Introduction

This paper examines promising approaches to better incorporate gender dimensions into nutrition-focused interventions in South Asia in order to improve their overall effectiveness. It is the second of a series on gender and nutrition in South Asia. The first paper³ explored why gender matters for undernutrition in the region and conducted a mapping of regional nutrition initiatives to find that gender is too narrowly addressed in most programs if at all. Adequately addressing gender⁴ requires nutrition programs to focus not only on health services and information for the mother and her children, but also on her autonomy and the support she receives from her partner, other household members, and the broader community. This focus is especially important for adolescent mothers in the region, who have very low status (Sen and Hook 2012).

Gender is a key piece of the “South Asian Enigma.” This term refers to the fact that South Asia has the world’s highest rates of undernourished children despite having experienced high economic growth during the last decade (World Bank 2011). Forty-two percent of all South Asian children under five are underweight, compared with 23 percent in West and Central Africa, the second worst region for malnutrition (UNICEF 2012). Paradoxically, these African regions are poorer, less educated, and less developed than South Asia. It has recently been concluded that women’s low status in South Asia is a main factor for the region’s high malnutrition. South Asian women’s low position and high levels of malnutrition exacerbate their children’s nutrition problems. Researchers have asserted that malnutrition in South Asia would decrease by 13 percent if gender equity were attained (Smith et al. 2003).

If improving nutrition outcomes requires addressing gender more broadly, the objective of this paper is to identify various approaches that might be used to do so. Specifically, the paper draws on a wide array of literatures and also highlights 31 experiences from across the world that are relevant to achieving one or more of the following: enhance women’s economic empowerment and household autonomy; increase both household and community support for the woman and her own and her children’s nutrition; and target adolescent girls. The remainder of the report reviews the conceptual framework and methodology that guide the literature review, presents the findings from that effort, and concludes with a discussion on the implications of those findings. Appendices 1-4 summarize each of the 31 individual cases.

³ The first paper, titled, Gender-Inclusive Nutrition Activities in South Asia: Mapping Report (Sen and Hook 2012), can be downloaded from <https://openknowledge.worldbank.org/handle/10986/11904>.

⁴ Gender refers to the socially constructed and learned female and male roles, behaviors and expectations which translate biological differences between men and women (usually termed “sex”) into social norms that define appropriate activities, rights, resources and power (World Bank 2011: 46).

B. Conceptual Framework: Low Women's Status and Nutrition

The conceptual framework that guides the literature review ties low women's status to the nutrition status of their children as well as the women themselves (Figure 1). Specifically, the literature review focused on four dimensions of women's status that were found less frequently addressed in nutrition interventions: (1) empowerment and autonomy, (2) household support, (3) community support,⁵ and (4) adolescent girls – who were very rarely targeted by nutrition initiatives.

In the context of nutrition, each of these words takes on particular meanings.

- *Empowerment* refers to a woman acquiring the resources, especially control of income, that enable her to act on her own behalf and for her children's well-being.
- *Autonomy* refers to a woman having greater "voice and vote" in household decisions and more control over her own "life options" (Blumberg 1984) and her children's well-being. Life options may include: increased control of fertility, greater freedom of movement, and decreased risk of violence.⁶ Vis-à-vis children, her ability to spend income she has earned on their nutrition, health and education is key. Bloom et al. (2001:68) define autonomy as the capacity to manipulate one's personal environment through control over resources and information in order to make decisions about one's own concerns or about close family members (see also Engle et al. 1999).
- *Household support* refers to providing the high-power members of the household—men, paternal grandmothers, or mothers-in-law—with basic nutrition information about the needs of the young woman and her children. It also includes providing them with basic gender information about women's child welfare-focused spending patterns as well as incentives to counter traditional gender ideology, norms, and practices which prevent women from earning and controlling income that could alleviate malnutrition.
- *Community support* refers to training and using volunteers, and providing them with incentives to promote sustainability and information sharing. Volunteers, including paternal grandmothers and men, can be encouraged to influence community or religious leaders as well as other members of the community with the aforementioned information, in order to promote nutrition and income control for young women.

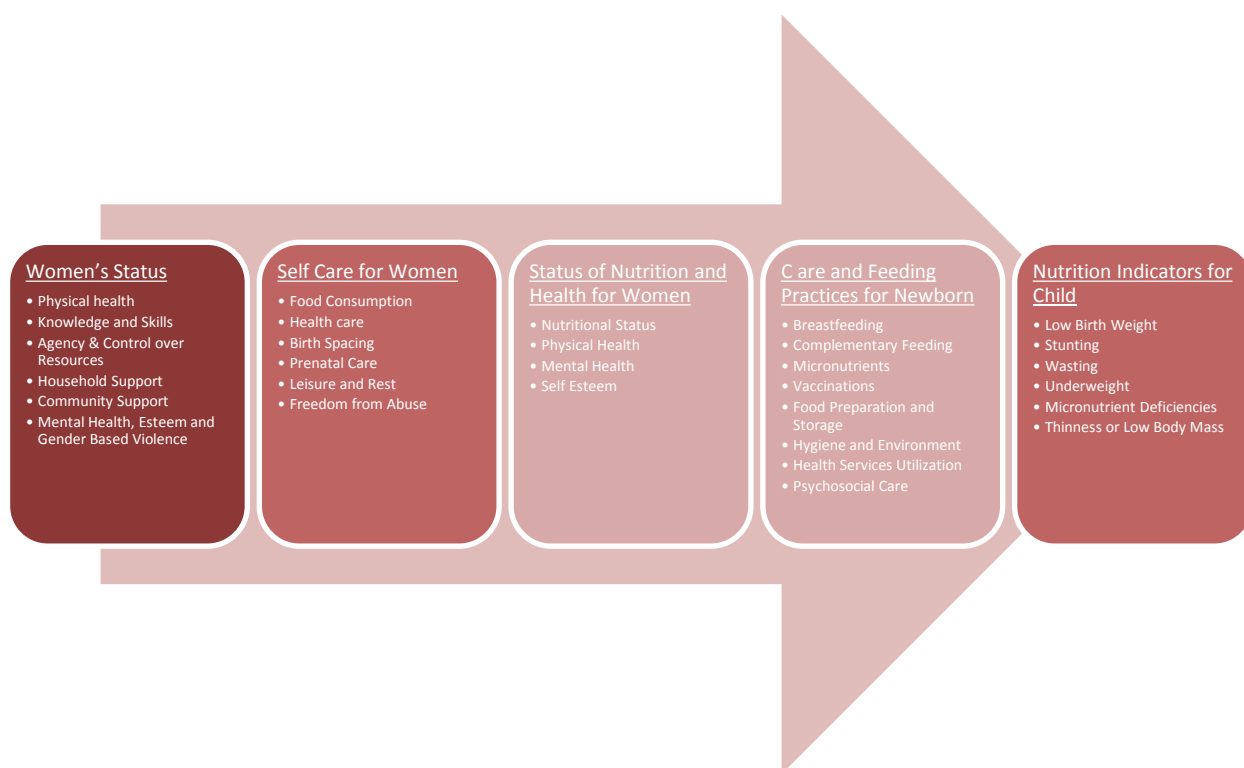
The low status of women in South Asia is the result of several factors. First, women have a significant disadvantage in the predominant kinship or property system, which strongly favors men. Descent is overwhelmingly patrilineal, so males disproportionately inherit assets. A bridal couple traditionally lives with or near the male's close male kin (i.e., "patrilocal residence"), so a bride may start married life at the bottom of the household pecking order with no kin, friends, or other allies nearby. This disadvantage is not widely discussed in the nutrition literature. Second, women also are much less likely to earn—and control—income than counterpart men. To the

⁵ Given the paucity of mental health interventions and a weak evidence base on the effect of such interventions on nutrition outcomes, a focus on this issue was omitted from the scope of this review. However, there is much reason to think it is a relevant factor (see e.g., Engle et al. 1999) that deserves special attention in future work.

⁶ Women's relative economic power is hypothesized to be the most important (but far from the sole) factor affecting the level of gender stratification in a group; greater control of various "life options" is posited as a major dependent variable (Blumberg 1984; 1988; 1991a).

contrary, a woman may be viewed as an economic liability rather than an asset. These two factors result in most South Asian women being economically disempowered. This leads to a number of other negative outcomes, all of which are associated with poor nutrition outcomes for women and children: less self-confidence, less decision-making power in the home, less control over fertility, less freedom of movement, and a greater likelihood of being victims of domestic violence (Blumberg 1984, 2004, 2009a, 2009b; Blumberg and Coleman 1989). A third factor is the prevalent gender ideology, which tilts strongly toward men. In sum, lacking economic power or autonomy and culturally subordinated, young married women lack access to good nutrition and healthcare for themselves and their children.

Figure 1 - Framework: Implications of Women's Status on Nutrition ⁷



The low status of women has important implications across a number of social and human development dimensions. The regional gender inequality has predictably led to a number of patterns. A higher proportion of South Asian women marry and give birth as teenagers than those in any other region. It is these adolescent mothers who are the most likely in the world to be underweight and, therefore, have high rates of low birth weight babies. Such low birth weight babies are prone to serious, even life-long, health problems. Past early childhood, South Asian girls tend to receive less nutrition and healthcare and be underweight by adolescence (UNICEF 2012), and maternal mortality is estimated to be two to five times higher among adolescent girls than adult women (Sethuraman and Duvvury 2007). In short, a lack of empowerment is associated with a decreased capacity for women to invest in their own and their children's nutrition (Bhagowalia, et al. 2010). There is also evidence that gender bias exists with regards to

⁷ The framework is drawn from Smith et al. 2003 and adapted from Engle et al. 1999 as discussed in the first paper in this series (Sen and Hook 2012).

treatment and investment in the health of children (Sinha 2009). This gender bias is closely linked to the literacy and education of mothers (Borooah 2004); an estimated 63 percent of South Asian women over 15 years old are illiterate (World Bank 2011).

The implications of low female status are particularly stark for nutrition outcomes in the region. South Asia has the highest proportion of Low Birth Weight (LBW) babies at birth, approximately one-third. Other estimates run from 25 to 50 percent (Sethuraman and Duvvury 2007). LBW babies are prone to serious, sometimes lifelong, health problems (WHO 2004). LBW has a direct correlation to the mother's malnutrition during pregnancy and it has been discovered that South Asian women gain only 5 kg. during pregnancy, half of the recommended 10 kg. (World Bank 2009). Two other factors for LBW are young maternal age and low pre-pregnancy weight (Sethuraman and Duvvury 2007). As noted, South Asia has the world's highest proportion of teens that marry and give birth and the highest proportion of underweight teen girls. South Asia fares marginally better in exclusive breastfeeding for infants aged 0–6 months, which experts recommend, especially for those at risk of malnutrition. For example, only 46.3 percent of babies in India from 0–5 months of age are exclusively breastfed (Shroff et al. 2011), as are only 43 percent of infants less than 6 months in Bangladesh (UNICEF 2009). Women are at high risk for developing anemia and other vitamin deficiencies, which account for almost one-fifth of maternal deaths in rural India (Haseen 2004). Use of health facilities for antenatal care is very low in the region, as is knowledge about health care in both urban and rural areas (UNICEF 2011). Mistreating diarrhea in babies and young children in South Asia is widespread, contributing further to their malnutrition (Halvorson 2004; Bentley 1998; Almroth et al. 1997; Mull and Mull 1988). Diarrhea is one of the primary causes of infant mortality in Pakistan (USAID/Pakistan 2007). Moreover, narrow birth spacing in South Asia is common. A short amount of time between births and/or pregnancies exacerbates malnutrition while placing both mothers and children at risk for many additional health problems, especially if the women do not increase their food intake during pregnancy and lactation (Huffman et al. 2001; Sebastian et al. 2010).

While some nutrition interventions in recent years have been connected to economic dimensions, social dimensions are also important. Economic programs (e.g., savings and microcredit) promote women's earning and control of income; a few of these programs also target single and, occasionally, married adolescent girls. A rising number of these empowerment initiatives involve homestead gardens that yield micronutrient-rich vegetables and income from the sale of surplus produce. But economic interventions to increase the empowerment and autonomy of young women and adolescent girls are not enough. A major reason is that the level of income generated may be insufficient⁸ to counteract the structural and cultural inequalities South Asian women face. Without decision-making power in the household or community, women remain vulnerable to men and paternal grandmothers, whose support or opposition is critical to the success of any nutrition intervention.

⁸ In two of the cases, an HKI Homestead Garden initiative in Bangladesh, Cambodia, Nepal and Philippines (HKI 2010) and the ELA Centers in Bangladesh (Shahnaz and Karim 2008), it appears that female control of income was widespread but there is no indication how this was achieved. "How" is a good topic for future follow-up.

C. Methodology

Drawing on the conceptual framework, the literature review focused on selected articles by known authors and searched a variety of databases. These included those of the World Bank, the International Food Policy Research Institute (IFPRI), academic databases such as JSTOR and PubMed, Google Scholar, and other general search engines. The literature review also included several social science studies that were not centrally concerned with gender and nutrition, but provided relevant findings nonetheless.⁹

In at least one instance, however, a strong program that involved several of the four main categories was not included because it did not culturally match the situation in South Asia. An impact assessment of community kitchens (*comedores comunales*) in Peru showed innovative, groundbreaking programs that had improved women's nutrition (Huffman et al. 1990). But the success of these kitchens is not easily replicated in South Asia. It is unlikely that women in conservative communities in countries such as Pakistan, Bangladesh, Afghanistan, and India, where young females' mobility is constrained, would be able to replicate an initiative that requires them to be out of the house for at least one full day every two weeks, to prepare healthful meals for their neighbors, and to be absent from the home to participate in the program.

D. Summary of the Findings

The literature review yielded many useful studies, including 31 cases spanning Africa and Latin America as well Asia that are summarized in Appendices 1-4. Several deserve mention at the start. The HKI Homestead Food Production approach came off particularly well: Women in Cambodia, the Philippines, Bangladesh and Nepal not only had a new source of nutrition but also a new source of empowerment – income, the spending of which was largely under their control (Helen Keller International 2010). School-based nutrition education programs comprised another valuable type of intervention, especially where parents were given incentives for keeping adolescent girls in school, e.g., in Nepal (WFP 2012). The BRAC training and income programs for adolescent girls in Bangladesh seemed particularly promising, too (Shahnaz and Karim 2008). They combined training in income generating activities with credit. In addition, they provided information about health (although not nutrition), as well as opportunities for reading and socializing. The Hearth/"positive deviance" approach also appeared to work well (Wollinka et al. 1997). A program that targeted grandmothers in Senegal was quite successful (Aubel et al. 2001). Even more so was a village-level initiative in The Gambia where volunteer teams of five women and two men achieved near-100% exclusive breast feeding from birth and other infant care improvements (Semega-Jannah 1998). And an intervention in Mali proved notable for having reached men in an effective way via a dramatic radio show about nutrition featuring a male protagonist (Parlato and Seidel 1998).

⁹ By and large, the nutrition literature rarely includes work by sociologists and anthropologists. As a result, some of the gender and nutrition articles reviewed for this study tentatively suggest variables about gender and empowerment (especially economic empowerment) that the authors proved unable to array in temporal sequence or magnitude of importance, apparently unaware of social science work outside their area that has studied these issues for decades.

1. Interventions to improve female empowerment and autonomy

Several nutrition programs were able to improve female empowerment and autonomy by incorporating various means to generate income, such as homestead gardens, access to credit, group-based income-generating activities, and conditional cash transfers. Specific cases of each are described below. Ideally, however, the most effective programs to increase empowerment would include several key features. First, they would ensure that the targeted women not only earn income but control it. Second, they would encourage the powerful members of young married women's households – men and paternal grandmothers – to be supportive. Third, they would utilize peer advocacy and community-oriented programs that provide information about nutrition and gender as well as small incentives, so household power figures would not try to seize control of income or marketable food generated by those women.

Homestead gardens to raise nutrition and women's economic power. Providing women with a source of income most could control while improving child/mother nutrition was one of the major achievements of the HKI Homestead Food Production (HFP) programs in Bangladesh, Cambodia, Nepal and the Philippines (HKI 2010, Case Study 9 in Appendix 1 on Women's Household Autonomy): In general, women earned – and 73 percent controlled the spending of – income from sale of surplus micronutrient-rich vegetables grown in their home gardens. Concomitantly, anemia in both their children 6-59 months and the women themselves decreased. Others (e.g., Meinzin-Dick et al. 2011 in Case Study 3) find homestead gardens an excellent strategy for increasing women's income and their control of that income as well as for improving their children's nutrition – the authors' only complaint is that this strategy still is underutilized. No HKI assessments mentioned anything negative about homestead gardens but the HKI experience remains to be validated by others.

Credit plus Nutrition Education. Women's economic power also rose in a Credit with Education project in Mali evaluated in 1996 (De Groote et al., Case Study 7). But the critical relationship between women's income and nutritional outcomes was not even mentioned in a 2003 study of a Credit with Education project in Ghana and Bolivia (MkKelly and Watson; Case Study 1). In the 1996 study, women's credit was positively related to preschoolers' nutrition. But mothers of preschoolers proved unable to increase their income from the credit, whereas income rose among mothers of school-age children. Moreover, the poorest women increased their incomes but may have worsened their own nutrition (a weak statistical result). These outcomes caused De Groote et al. to consider whether the initiative worsened the most vulnerable women's time burdens. The 2003 evaluation is silent on this issue too. Still, the Credit with Education model may be worth pursuing – preferably in a pilot program that carefully assesses women's time constraints as well. If these again emerge, (a) tie-ins should be considered with entities addressing rural women's biggest “drudgework” issues, their labor in providing water, cooking fuel and processing, and (b) the time burden issue might well be examined in the Homestead Food Production model, too.

Group micro-projects that raise participants' income and include women as well as a nutrition component. Women's economic power also rose, apparently by accident, in the World Bank (2001) Community-Based Food Security Project in Benin (Case Study 26, in Appendix 3 on

interventions increasing community support). The reason was that women, although untargeted, nonetheless flocked to – and benefitted from – the often profitable group micro-projects that were the biggest component of this initiative. Additionally, the smaller nutrition component also proved effective in driving down malnutrition (although there was no analysis of whether women’s new income from the project played a significant role in the drop in malnutrition).

The cash transfer (CCT) approach. Finally, the fairly sizeable all-cash transfers paid to women in the Bangladesh Road Maintenance Program (Ahmed et al. 2009, Case Study 6) empowered the women who worked on keeping up the roads – especially the married women¹⁰ - while also increasing calories for school-age (but not preschool) children. Two CCTs in Appendix 2, on interventions increasing household support, showed positive but gendered results: 1. Adato et al. 2011 (Case Study 10) found that CCTs paid to women increased health but health education was important and men’s influence and gender norms also affected outcomes in Turkey, Nicaragua, El Salvador and Mexico. 2. Davis et al. 2002 found that in Mexico’s PROGRESA CCT program, when the money went to women, children’s school attendance increased; when it went to men, there was no impact. Another program, PROCAMPO, gave benefits to male farmers; school attendance increased but not as much as with PROGRESA’s cash transfers to women.

2. Interventions to increase household support

There are two principal mechanisms identified to increase household support: conditional cash transfers and behavior change communications (BCC). There are some variations in BCC initiatives with regard to more optimal delivery mechanisms, but ultimately the literature review uncovered few successful interventions that target households that also address the issues underlying malnutrition among women and children. Much better are holistic and creative approaches that reach beyond the household and also are inclusive of men, grandmothers, and community leaders who are influential in providing mothers with advice and support. Several such cases are discussed below.

Conditional Cash Transfers. Many household interventions have focused on Conditional Cash Transfer programs (e.g., Adato et al. 2011; Paes-Sousa et al. 2011). CCTs give cash to families, mostly to mothers, if they fulfill certain conditions, such as children attending school and getting health checkups. CCTs alone may not be very effective unless they are integrated with community-based interventions and with projects that improve women’s autonomy. These programs have proven effective in providing short-term increases in consumption, but there is no evidence that they provide long-term results that address the root causes of chronic malnutrition.

BCC interventions. Some innovative BCC programs are identified, most notably in Mali (Parlato and Seidel 1998). There, a comprehensive mixed media campaign involving radio and dramatic performances proved very popular and effective at reaching a wide audience. Radio and theater may be underutilized as means of reaching rural areas, and these programs also can be

¹⁰ Ahmed et al. 2009 didn’t mention any negative consequences to the women doing road work, other than some community criticism of manual labor by women. But it’s quite possible to imagine negative tradeoffs for nutrition when women, especially pregnant ones, engage in heavy manual labor. A study in Nepal examining such tradeoffs is forthcoming from the World Bank.

adapted to the local context if they are implemented by local community members. This was also one of the few interventions in the entire report that targeted fathers using a communications/education component. In fact, the protagonist of their most popular radio drama is a man who initially did a poor job in supporting his family's nutrition. (A project targeting husbands led to more weight gain in pregnancy by Khmer women in a Thai refugee camp (Roesel et al. 1990) but is not included here due to poor documentation. Still, it also supports the value of targeting men.)

Grandmothers. Aubele et al. (2001) describe a participatory education strategy that targets grandmothers, who have an important role in maternal and child health within their households and communities. Interactive sessions included grandmothers as well as male and female community leaders and health workers. Positive results showed that the grandmothers proved to be enthusiastic participants. The findings underscored the role that grandmothers can play in implementing healthy behaviors and in changing community norms.

Hearth/“positive deviance” models. Also described in this report is the Hearth Nutrition Model (Wollinka et al. 1997), which utilizes the concept of positive deviance. This includes an intensive two-week treatment and education program with the idea that immediate positive results will motivate mothers to continue with improved long term care. This approach has been used in only a handful of interventions with mixed results but further consideration is warranted. The model includes a promising way to mobilize groups of local volunteers and is also noted as being particularly cost effective.

3. Interventions to increase community support

The interventions falling under this category include a broad range of programmatic strategies. The traditional model, implemented at the national level, focuses primarily on improving the infrastructure of the health system in order to encourage pre-natal and post-natal care, as well as follow-up visits. Hospitals and community health centers do play a central role in providing both long- and short-term care to women and children. What most government-implemented programs lack, however, is a strong focus on using community resources to address the underlying causes of gender inequality.

In recent years, a number of programs have utilized existing networks of community leaders, volunteers, and health workers to go beyond the traditional model and do more than treat the immediate symptoms of malnutrition. Sometimes, new community networks can galvanize people and achieve dramatic results. In The Gambia, volunteer groups of five women (including the traditional birth attendant) and two men used home visits, plays, songs and other creative methods to change perceptions and behavior about, e.g., exclusive breast feeding from birth (Semega-Jannah 1998). Also, educational sessions have been incorporated into many programs with mostly positive results. For example, Inayati et al. (2012) found that an intensive nutrition education model, which focused on frequent and interactive sessions and used culturally adapted material, proved effective in improving knowledge and practices of child feeding and breastfeeding.

In addition to education sessions, community-based programs may also include schools as a site for intervention, and may also include the creation of community gardens and kitchens. The more innovative programs seek to invest in the human and economic capital of women. Over and above homestead food production, which provides nutrition and income benefits, community gardening offers an opportunity to increase women’s social networks, self-esteem, and visibility in the community.

A further untapped resource is women’s ability to become involved in local leadership and political organizations. The Hunger Project (2010) has pioneered strategies in Bangladesh and India that work from the ground up to involve women in locally elected councils where they are empowered to produce change addressing the underlying poverty and gender discrimination that produces such high levels of malnutrition among women and children. Although this is indirect, it builds momentum over time: local councils with more women are more likely to consider women’s and children’s issues, including nutrition. And local governments have the ability to respond to local nutrition needs more broadly than households and more accurately than national-level institutions. Empirically, Tripp and Kang (2008), in a multi-country study, found that elected women representatives are more likely than their male counterparts to promote legislation concerning children, including health and education.

Finally, implemented at the local or village level, comprehensive community-based programs can effectively change household health practices through intensive education. They also can give women opportunities outside the household and provide emotional, social, and economic support that can bring about long-term change (see, e.g, Parlato and Seidel 1998; Aubel et al. 2001; The Hunger Project 2010; Semega-Jannah 1998). The data (including from a number of unsuccessful national or international programs, only several of which are included in the cases presented below) indicate that the top-down approach of most government-supported “community-based health interventions” (see Arifeen et al. 2004) does not engage much of the community. This approach needs to be supplemented by programs which have proven to be effective at mobilizing networks of local volunteers.

4. Interventions to reach adolescent girls

Although the literature on adolescent girls proved sparse, it suggests that the interventions likely to succeed in South Asia should focus on keeping them in school, delaying marriage, and earning an income.¹¹ Gaining the support of traditional leaders in the community for these objectives is an enabling factor that merits encouragement.

Education, or keeping girls in school, is the first priority, since almost no adolescent girls continue their schooling after marriage – when it is much more difficult to stop the cycle of malnourished, anemic teens having vulnerable, low birth weight babies. Simply put, the most effective means to reach adolescent girls with nutrition information is at school. But far too few South Asian adolescent girls are in school – or unmarried – so gender-inclusive nutrition interventions should look more closely at what it would take to keep teen girls in school. The

¹¹ The literature on nutrition and adolescent girls is scant and rarely involves the topics central to this report (e.g., Kurz and Johnson-Welch’s 1994 summary of 11 teen nutrition studies).

answer seems to lie in the family having incentives to do so. Below, an example from Ecuador describes how parents encouraged daughters to stay in school in order to qualify for high-paying jobs in expanding export flower and broccoli industries. (Blumberg 1991b). Often, however, the incentives come from interventions, not global economic trends:

CCTs have been used successfully in Latin America (e.g., in Mexico and Brazil) to keep girls in school and are increasingly being implemented in Africa and the Middle East (Fizbein et al. 2009; Handa and Davis 2006). One South Asian example is the World Food Programme intervention in 11 Western and 5 Terai districts in Nepal with low girls' attendance: Monthly rations of cooking oil were given as incentives for regular school attendance – and rates of girls' school attendance increased by as much as 27 percent among the 62,000 girls reached through this program (WFP 2012).

However, the best weapon for innovatively decreasing the malnutrition and too-young marriage and childbearing of South Asian teen girls seems to be to increase their income-generating ability, in or out of school, so that their families see them as assets rather than drains on resources. Some potentially path-breaking interventions were found in the literature.

Teen girls' income as a parental disincentive for early marriage. A number of sources that were reviewed (not all of them included in the sections below) underline the need for national campaigns against early marriage. They stress that South Asian adolescent girls are very likely to be both underweight and anemic, and tragically likely to produce low birth weight babies who are disproportionately more likely to suffer in health, intelligence and productivity in their future lives. In addition, maternal mortality among adolescents is two to five times that of adult women (Sethuraman and Duvvury 2007). But where early marriage traditions are entrenched, how can a campaign alone create change? The evidence indicates that cases where girls' age of marriage rose sharply often involved a new economic opportunity for girls to earn income at an age when they are still living at home; this led many parents to encourage the girls to keep earning and remain single longer. One example is Case Study 31: Shahnaz and Karim's 2008 evaluation of the exceptional BRAC initiative in Bangladesh, Employment and Livelihood for Adolescents (ELA) Centers. Thanks to the BRAC interventions offering well-designed IGA and credit (as well as more "social" activities and some health knowledge), the girls became economic assets for their families, and the likelihood of early marriage was reduced¹².

A Latin American example of incentives for parents to keep girls in school and out of early marriage. Blumberg (1991b) found a similar situation in the Central and Southern Andes of Ecuador in a study of the country's new export industries. Part of the research involved NTAEs (non-traditional agricultural exports, such as flowers and broccoli). When the NTAE explosion began, these highlands areas long had been depressed, so jobs for adolescent girls were scarce and low-paying. Ecuador soon became a major exporter of both flowers and broccoli and firms in the burgeoning sector had their pick of young job-seekers. They hired mostly late adolescent girls and tended to choose those with above-average education (senior high school grads). With

¹² Might this also work for married teen girls? If they had income-producing skills, their new in-laws might value them more, improve their nutrition and be less insistent on a first grandchild within a year. The qualitative study by Sethuraman et al. (2007) on delaying first pregnancy in Bangladesh and India never considered brides' income although many sociological studies find that female income increases their say in fertility decisions.

overtime, wages were often higher than what a baccalaureate graduate of the highest academic high school track could obtain. Two trends quickly emerged: (a) parents urged the daughters who already had the NTAE jobs not to marry young – invariably, they turned over a significant share of their wages to their mothers for family needs; and (b) parents urged the working daughter’s younger sisters to stay in school, so they could get those good jobs, too. Both parents and daughters saw the girls as economic assets, not liabilities. They viewed education and subsequent employment as more important than early marriage. Changes of the magnitude and speed that occurred in the Ecuadorian Andes are unlikely for rural South Asian adolescent girls in the near future but some of the case studies below show that even a modest increase in their income or prospects of earning one in the near future had transformative potential.

Any intervention focused on increasing the “life space” and economic options for South Asian adolescent girls should also keep considerations of honor in mind. They should focus on convincing conservative family members as well as community members and leaders (including religious leaders) that the new activities won’t compromise the girls’ or their family’s honor. Two projects targeted at adolescent girls offer shining examples. The Bangladeshi BRAC ELA project (Shahnaz and Karim 2008) and the clever *Learning Games* intervention for Indian adolescent girls and their mothers or mothers-in-law (Gray and Chanani 2010) both utilized effective and proactive outreach programs to parents and the community to explain that their ground-breaking programming for adolescent girls protected honor and was safe and beneficial to all concerned.

E. Implications of the Findings

Overall, though the ideal “gender-inclusive nutrition interventions” package (GINI for short) was never encountered, based on the findings of this review, it can be described. Indeed, it is quite consonant with this study’s conceptual framework. The most effective programs would encompass the following **success factors**: (a) ensure that the targeted women not only earn but control income (as in the HKI homestead garden projects); (b) get the powerful members of young married women’s households – men and paternal grandmothers – on board by means of peer advocacy and community-oriented programs that (c) provide them with information on nutrition and women’s child welfare-focused spending patterns, (d) as well as (small) incentives so they don’t seize control of income or marketable food generated by those women. These programs also would (e) train forward-looking local women (including grandmothers) and men for volunteer roles (preferably with small incentives for sustainability). (f) They would provide BCC on nutrition and help increase support by community leaders and members for young women’s livelihoods as well as for mother/child nutrition. (g) Finally, the ideal GINI would also target teen girls, offering them nutrition information, along with incentives to parents to keep them in school and programs for the girls to earn money. Positive examples encountered in the literature are presented below (along with some partial successes that need further refinement). If polished and scaled up, such programs could put a big dent in the “South Asian Enigma” and both the gender inequities and malnutrition that define it.

Working with specialists in credit and income-generation for women would open new possibilities for nutrition efforts. It seems counterproductive for nutrition interventions coming

from a Ministry of Health in a South Asian country to suddenly start their own microfinance initiatives or other ways to increase the economic empowerment of women and adolescent girls when so many well-functioning programs specialized in this field would be willing to add a nutrition/health focus. With the exception of the Homestead Food Production model of the Helen Keller Institute, which will be discussed below in positive terms, it seems best that most other attempts to increase female economic empowerment should be done with **tie-ins** to groups that already specialize in credit or income-generating activities.

Earning income without controlling it is not enough. Although women's economic empowerment/autonomy proved empirically to be a critical factor in reducing children's malnutrition in a number of studies, few of the interventions reviewed for this paper distinguished between merely earning income and controlling the allocation of that income, with the latter being far more important. Indeed, few assessments were sensitive to that difference. Control of income is an important independent variable for women's autonomy. Even fewer of the references read for this study seemed aware of the fact that women's relative control of income and other economic assets tends to affect other variables they find importantly linked to women's nutrition. Simply put, women's control of income tends to be the independent variable vis-à-vis the others. Nutrition researchers' lack of awareness of this seems to stem, in part, from their lack of familiarity with sociological and other social science studies of these issues. Variables that seem to be outcomes of women's greater economic power include increased self-confidence (studies date back to Kusterer et al., 1981); more voice in household decision-making (e.g., Blood and Wolfe 1960; Blumstein and Schwartz 1991); greater control over fertility (the pioneer research is Weller 1968),¹³ including not only number of children but also birth spacing (e.g., Blumberg 1984; Engelman 2008); more freedom of movement (Blumberg 1984, 1986);¹⁴ and less likelihood of being victims of domestic violence (e.g., Levinson 1989; Blumberg 2004)¹⁵.

Working with – and scaling up – bottom-up approaches appears fruitful. One of the major implications to come out of this report is that bottom-up approaches have the potential to help end the cycle of poverty and malnutrition. These programs are often not as well funded or supported but have offered creative and innovative solutions that traditional top-down programs have lacked. The challenge will be in scaling up these programs, and also in learning how to adapt them to meet the needs of diverse communities throughout South Asia.

Other recent empirical findings highlight the importance of factors that are little represented in policy or existing interventions, such as seasonality and women's time burdens. One of these is the frequent failure to take **seasonality** into account. Babu et al. (1993)

¹³ Increasing their control of fertility frequently seems to be the first thing women do for themselves when they gain control of income; other actions tend to be aimed at raising their children's well-being (Blumberg 2001).

¹⁴ A paper for the World Bank based on the author's field research and literature review (Blumberg 1986) indicate that most married Muslim Hausa women in Northern Nigeria run home-based businesses, and have stretched the boundaries of seclusion marriages (*kulle*) in ways that permit most of them to be out in the (cooler) twilight hours.

¹⁵ In David Levinson's 90-society sample (1989), economic dependency proved the strongest factor linked with violence against women; in Blumberg's 61-society sample (1978, 2004), women with well-established economic power were less likely to be beaten. But a short-term spike in violence could occur the more men feel threatened by a recent increase in previously subordinated women's economic power (Blumberg 1984, 2004); this also has been found in some CCT programs (World Bank 2012).

identify gender bias in agricultural productivity that varies by season in Tamil Nadu, India. Seasonality also influences nutrition intake and the literature suggests that women are more negatively affected than men due to the fact that men are involved in more manual labor and thus receive more food (Sen and Sengupta 1983). Babu et al. (1993:1319) suggest that “Nutrition education programmes should focus on issues related to food storage, use of indigenous foods, and intra-household allocation. To reduce the effect of seasonal variation in food availability on the food and nutrient intake, rural public employment schemes such as ‘food for work’ programmes could be designed [for implementation] during the periods of poor harvest and targeted to the agricultural labour and subsistence-farming households.” Another important but relatively neglected factor for policymakers involves alleviating **women’s time burden and energy expenditure**. Many mothers are involved in labor both inside and outside the home which often goes unrecognized. Agee (2011:6) writes:

Women involved with agriculture in developing countries are responsible for work that is formally recognized, but even more of their time is taken up with activities not recognized by the formal work sector. Work of women has traditionally been underestimated for a variety of reasons: their informal activities are often home-based, and therefore difficult to measure; women, especially in rural areas, hold multiple jobs, which also go unmeasured; and value-adding post-harvest activities such as transformation and packaging of goods are also unmeasured. Gathering water and fuel can take several hours a day. Caring for children, including meeting their nutritional and health needs, also falls under a woman’s work domain, but is seldom recognized as “work.” Further complicating her situation, women are disproportionately less likely to benefit from time-saving agricultural technologies, including animal-driven traction. Women in agriculture across the developing world are paid less for longer working days.

The De Groote et al. findings (1996) highlight the need to take women’s time poverty into account, as do Henn’s Cameroon data (1988; discussed in Case Study 8, below) that women self-exploited to gain modest but significant amounts of income, working more hours on perishable crops that became marketable after a road was built to their village.

It is not clear what women do when they receive conflicting information, or who may have more authority and influence. Moreover, women are buffeted by competing sources of authority on childcare information. Women are usually the primary health care providers for their children, but the literature reveals that they may receive information, and often conflicting information, from a variety of sources including but not limited to their husbands, mothers, mother-in-laws, community health care workers, community leaders, and traditional healers (Almroth et al. 1997; Battacharya et al. 1985). Full policy and programmatic consideration of these little-explored variables will provide further challenges to future interventions but may well contribute to solving the “South Asian Enigma.”

F. Conclusions

The main conclusion is that the findings make the case that “GINI” in South Asia should also promote women’s economic empowerment and resulting rise in autonomy, specifically

by increasing income under women’s control. Based on social science studies rarely cited in the nutrition literature, this could also enhance women’s decision-making power, mobility, control over fertility and birth spacing, and reduce violence against them.

The most innovative, promising interventions are more comprehensive than traditional MCH programs and include outreach to others in the household (men and paternal grandmothers), or mobilizing community volunteers to promote good nutrition for both women and their children; now the challenge is to create a truly integrated approach that combines all of these with a new focus on empowering the young women themselves. Presently, however, beyond making women and children the target population, few mainstream nutrition interventions showed understanding of the gendered dimension of malnutrition.

Some of the most innovative solutions presented in this report are bottom-up interventions stressing community and volunteer involvement (e.g., Parlato and Seidel 1998; Aubel et al. 2001; Semega-Jannah 1998). Most of these interventions have the potential to be scaled up and supported so they can continue to tap the often enthusiastic services of volunteers – and in a non-exploitive, longer term way (e.g., with small incentives that, at minimum, cover their expenses). More can and should be done to soften traditional attitudes and get communities to support giving women greater access to/control of income as a way to benefit children, families and the community. Both program management and trained volunteers should be involved.¹⁶

These principles apply to aid aimed at adolescent girls, but interventions must begin with strong efforts to keep girls in school, including incentives to parents. This is the first step in reducing early marriage, a causal factor in underweight, too-young mothers having high proportions of low birth weight babies – who will be at risk for life-long health problems. A second step would be promoting income-earning for teen girls, a known parental disincentive for early marriage, since it changes daughters from burdens to assets. A follow-up activity might be extending the focus to married adolescent girls, with an emphasis on income and perhaps educating the household’s men and mother-in-law about not only nutrition but also the dangers of “too young pregnancy” to both mother and child.

G. Recommendations

To operationalize the conclusions, it is recommended that additional analytical work be undertaken to further explore the evidence that supports these possible interventions and their conceptual foundations. For those that are robust, small, pilot projects should then be undertaken by the World Bank, initially in at least two geographic areas varying in their level of gender inequality. Partners could be NGOs or willing health ministries.

¹⁶ Calling for men’s greater involvement in care responsibilities is not likely to be successful in South Asia, given the level of male dominance. In the U.S., for example, research has found that increased female income is closely linked to greater decision-making power and overall position in the relationship but only modestly related to male involvement in childcare and housework (Blumstein and Schwartz 1991). Fenstermaker et al. (1991) argue that this situation is quite resistant to change because women’s housework also involves “doing gender.” Since the 1960s, however, as women working for pay skyrocketed, men’s contributions to child care tripled and their housework contributions doubled (Fisher et al. 2006; Sullivan and Coltrane 2008). But women still do over 60 percent.

As part of “gender-inclusive nutrition interventions,” promote income for women, e.g., via homestead gardens or through ties with entities (such as microfinance organizations) already involved in such efforts – and also promote ways to ensure that women can control their income.

Include bottom-up methods and volunteers to reach household decision-makers, men and paternal grandmothers, with messages about both better nutrition practices for mother and child and the need for the mother to have income she can use to enhance infant and child nutrition. Using forward-looking men and, especially, grandmothers as volunteers would magnify such interventions’ impact. In order to promote sustainability over the long term, some modest incentives must be provided to the volunteers, above and beyond prestige, fancy diplomas, etc. Use community volunteers as well as NGO staffs to help change traditionalist attitudes toward (a) nutrition, (b) females earning and controlling income, and (c) education for teen girls.

With respect to adolescent girls, bolster parental support for their staying in school by (a) providing incentives to parents, and (b) making the schools more suitable for teen girls by adopting a useful intervention from World Bank girls’ education projects: making separate latrines for girls with doors that can be locked and safely enclosed by a “modesty wall.” Promote income-generation, to discourage early marriage and provide girls with resources after marriage. Those resources might not only improve her position within her new home with her husband’s paternal kin, but also increase their willingness to provide her with adequate nutrition and even to delay her first birth and space subsequent births: they would have financial incentives to do so.

Consider follow-ups for some important topics that were beyond the scope of this paper. Including reviewers’ suggestions, these involve looking at (a) ethnic minorities, (b) rural vs. urban milieus, (c) freedom of movement/mobility and (d) violence against women (VAW)¹⁷. (e) One reviewer also suggested further investigating the “conditions under which” women in South Asian households (and in other regions) are able to control at least part of income they earn as well as factors affecting how much, if any, of that income is spent on improving infant/child/maternal nutrition; this should include a literature search as well as possible fieldwork. Also, (f) more attention should be paid to newly married young adolescents, e.g., helping them to earn/control income and thereby, perhaps, gain leverage to improve their own nutrition and delay first births until they’re a little older. Nutrition programs aimed at married South Asian teens that include such an income component could reduce their high proportions of low birth weight babies and also decrease their high maternal mortality rates.

¹⁷ In follow-up work, it would be good to look at both freedom of movement and VAW in a more conceptual manner than in the nutrition studies reviewed for this paper. For example, a study of variations in degree of mobility of unmarried teen girls in rural Bangladesh (Naved et al. 2007) doesn’t consider any independent variables affecting a girl’s level of physical mobility. In contrast, sociological work finds that with greater economic power (e.g., income under their control), females tend to have more freedom of movement (e.g., Blumberg 1984, 1986). The same is true of work on VAW: Some sociologists and anthropologists see it both empirically and theoretically as an inverse outcome of women’s level of economic power (e.g., Levinson 1989; Blumberg 1984, 2004), whereas many nutrition studies treat it as a variable of unknown cause that seems linked, somehow, to greater malnutrition.

APPENDIX 1: INTERVENTIONS TO INCREASE WOMEN'S HOUSEHOLD AUTONOMY

Note on Intervention Case Summaries

The total bibliography reviewed was large, with a good deal of repetition. Some were early-stage reports on a project where a more comprehensive report provided the final impact evaluation. On close reading, others proved not as useful for the conceptual framework as hoped. Still others were early attempts or “proof of concept” of interventions that became more effective over time. As such, not all are summarized in this and the three subsequent sections of this report (on increasing community support, increasing household support and targeting adolescent girls). In this section, the materials are not arranged alphabetically by author or chronologically but, rather, in more of a narrative fashion that permits the lessons of each to build up toward the implications and conclusions discussions. It should be noted that the “Lessons” in each case are those of the original authors. Additionally, in this Women’s Household Autonomy section, the last lesson of each case study is those of the authors of this paper; that lesson is framed by brackets []. (For consistency and to facilitate comparisons, the same format and underlined headings are used for all 31 cases.)

1. Credit with Education - Ghana and Bolivia¹⁸

Implementing Agencies: Lower Pra Rural Bank *Credit with Education* program in coastal Ghana and CRECER (Crédito con Educación Rural) *Credit with Education* program in the rural highlands of Bolivia – both use a Village Banking model of microcredit; Funding Agency: Freedom from Hunger; Time Period: two multi-year studies beginning in the 1990s. [The baseline for Bolivia was conducted in 1994/5, according to the 1999 McNelly & Dunford evaluation of 1997 participants.]

Objective: Assess links between *Credit with Education* and improved nutritional status of children.

Programmatic Approach: Freedom from Hunger’s innovative *Credit with Education* model combines inputs of loans, savings and education (covering improved business practices as well as health and nutrition topics such as breastfeeding, infant/child feeding, diarrhea prevention/treatment, family planning, etc.), channeled through women’s associations. Expected first-order effects include changes in knowledge and practice, improved income and savings and increased self-confidence. Potential second-order effects are improved food security and children’s nutritional status.

¹⁸ McNelly, Barbara and April Watson. October 2003. *Credit with Education Impact Review No. 3: Children’s Nutritional Status*. Davis, CA: Freedom from Hunger.

Outcome/effectiveness of intervention: The article is a summary of two multi-year studies (MkNelly et al. 1996; MkNelly and Dunford 1999) “to evaluate *Credit with Education’s* impact on children’s nutritional status, on their mothers’ economic capacity, women’s empowerment and mothers’ adoption of key child survival health/nutrition practices” (MkNelly and Watson 2003:5). Changes in mother’s income in both countries’ programs were measured – it rose in Ghana but in Bolivia, it was family income that rose because many women used their increased income from the economic activities assisted by program credit to buy animals for the family. Children’s nutrition also was measured: It rose in Ghana (for both height for age, HAZ, and weight for age, WAZ); but in Bolivia, where some communities received inferior nutrition education due to high staff turnover, there was positive impact only in communities receiving the best education.

Method via which intervention was evaluated. In both Ghana and Bolivia, two major survey and anthropometric (heights and weights) data collection rounds were carried out, with different mother/child pairs participating in the two time periods. Following baseline data collection, study communities were assigned to either a *Credit with Education* program or control group. The sample consisted of women with children under 3 from three groups: Program participants for at least one year; nonparticipants in communities with the program, and residents of control communities. Program impact was evaluated by comparing the magnitude and direction of change in responses and measurements between the two data collection rounds among the three groups (ibid.).

Lessons. (a) Re **food security**, Ghana participant households showed significant improvements vs. the two nonparticipant groups; in Bolivia, little evidence of improvement in participant households was found. (b) Re **changed health/nutrition practices**, the most dramatic differences were in Ghana in participants’ knowledge and practice of exclusive breastfeeding. (c) Re **children’s nutritional status**, participants’ children in Ghana showed positive and significant improvements but in Bolivia, the only significant results were linked to high-quality education. [(d) Surprisingly, there was no analysis or mention of the relationship between rise in mother’s income and children’s nutritional status. This indicates that they are not clear about the full impact of women’s economic empowerment – including women’s control of income/assets – on factors affecting nutrition, as well as on nutrition itself.]

2. Gender-Based Returns to Borrowing on Intra-Household Resource Allocation - Bangladesh¹⁹

Implementing Agency/Funding Agency/Time Period. This academic research article uses data from the BIDS/World Bank survey from 1991 to 1992 with a follow-up in 1998-1999.

¹⁹ Alam, Saad. 2012. “The Effect of Gender-Based Returns to Borrowing on Intra-Household Resource Allocation in Rural Bangladesh.” *World Development* 40 (6):1164-1180.

Objective. The article “examines the effect of male and female self-employment returns to borrowing in rural Bangladesh on intra-household resource allocation and decision making abilities” (p. 1164).

Programmatic Approach. This econometric study compared expenditure patterns of men and women loan clients of microcredit and non-microcredit programs.

Outcome/effectiveness of intervention. In analysis by source of borrowing, women microcredit clients allocated more income to “female-oriented goods” – **children’s health, education** and clothing; women’s clothing; kitchen goods; soap – than women clients of non-microcredit institutions. More importantly, men and women spent increases in returns to borrowing differently: women spent more on goods more valuable to women (the “female-oriented goods” above), whereas men spent *less on goods valuable to women and spent more on goods valuable to men* (recreational expenses, personal items, men’s clothing, household repairs). “Moreover, female returns to borrowing lead to women taking a greater role in major economic and noneconomic household decisions; it also has a positive effect on a woman’s physical mobility. In contrast, male returns lower women’s ability to make household decisions” (p. 1165).

Method via which intervention was evaluated. Econometric analysis.

Lessons. (a) “First, different sources of income affect allocation of the income differently. This result means that increases in women’s business income from increased earning opportunities for women will affect the allocation of resources in their households differently than will increases in men’s income.” (b) “The second main finding is that an increase in women’s income leads to increased consumption of goods that are more valuable to women than to men. In contrast, an increase in men’s income decreases consumption of goods more valuable to women and increases consumption of goods more valuable to men. This result means that the allocation of household resources favors the woman when her income increases and serves as evidence of increased empowerment or bargaining power” (p. 1178, emphasis added). [(c) In essence, this article presents solid empirical evidence on the importance of female-controlled income and its impact on women’s decision-making/bargaining power.]

3. Linking Agriculture to Health and Nutrition²⁰

Implementing Agency: IFPRI; Funding Agency: Various, from Asian Development Bank to The World Bank; Time Period: 2011.

Objective/Research question and thesis: “How can standard agricultural development strategies... also create positive impacts on health and nutrition? This brief argues that a key element linking these programs to improved outcomes is the dimension of gender roles and gender equity” (p. 1).

²⁰ Meinzen-Dick, Ruth, Julia Behrman, Purnima Menon, and Agnes R. Quisumbing. 2011. “Gender: A Key Dimension Linking Agricultural Programs to Improved Nutrition and Health.” Washington, DC: International Food Policy Research Institute (IFPRI). (2020 Conference Brief)

Programmatic Approach: Authors advocate adding a focus on gender/gender equity to standard agricultural development strategies for mutual benefit of agricultural development and women's position.

Outcome/effectiveness of intervention: The authors note a large body of evidence on differences in male/female spending, with women more likely to spend income they control on food, healthcare and education of their children, and also that "empirical evidence shows that increasing women's control over land, physical assets, and financial assets serves to raise agricultural productivity, improve child health and nutrition, and increase expenditures on education, contributing to overall poverty reduction" (p. 1).

Method via which intervention was evaluated. Review of studies on both central concepts and empirical findings.

Lessons. (a) Arimond et al. (2010) identify five pathways through which agricultural interventions can affect nutrition: increased food for own consumption, increased income, reductions in market prices, shifts in preferences, and shifts in control of resources within households; gender is involved in all five. (b) Meinzen-Dick et al. assert: "In short, the impact of agricultural interventions on nutrition may depend on two gender-related factors: Does the agricultural intervention enhance *women's control over assets*? Does it include *nutrition education* to ensure better use of the additional food or increased income?" (p. 1, emphasis in original). (c) In "Conclusions and Policy Implications," the authors also note that "Homestead food production is still an underutilized strategy... Evidence indicates that even small-scale homestead production of micronutrient-rich foods, when combined with nutrition education, can have impact greater than its income effects... [T]he available evidence indicates that increasing women's access to resources and control over household income will have important implications for the health and nutrition of the family, and particularly of women and children." [(d) Lessons (b) and (c), above, crystallize the key reasons for focusing on women's economic empowerment and control of resources in order to boost the nutrition of their children and the women themselves.]

4. Does Maternal Autonomy Influence Feeding Practices and Infant Growth - India²¹

Implementing Agency: Integrated Child Development Services (ICDS, India's largest maternal-child health government program) ran the larger project, a "longitudinal randomized education intervention trial aimed at improving the feeding, growth, and development of 3-15 month old infants" (p. 448), but the authors designed and carried out the present research. Funding Agency: NIH/NICHD. Time Period: Cross-sectional baseline data were collected between September 2005 and July 2006; the end of the longitudinal intervention trial is not specified.

²¹ Shroff, Monal R., Paula L. Griffiths, Chirayath Suchindran, Balakrishna Nagalla, Shahnaz Vazir and Margaret E. Bentley. 2012. "Does Maternal Autonomy Influence Feeding Practices and Infant Growth in Rural India?" *Social Science & Medicine* 73(3):447-455.

Objectives. “(1) Identify several dimensions of autonomy through confirmatory factor analysis, and (2) examine how autonomy relates to exclusive breast feeding behavior and infant growth indicators. Specifically, we examined whether rural Indian mothers with higher levels of autonomy were more likely to exclusively breast feed infants and have infants with better growth, after accounting for potentially confounding covariates” (ibid.).

Programmatic Approach. Survey research with econometric analysis.

Outcome/effectiveness of intervention. Results indicated that: (1) mothers with higher financial autonomy were more likely to (exclusively) breastfeed 3-5 month old infants, and (2) mothers who were more involved in decision-making had infants that were less underweight and less wasted.

Methods via which intervention was evaluated. This six-author academic research article uses baseline data collected from 600 mother-infant pairs in 60 villages in Nalgonda district of Andhra Pradesh, India who were involved in the ICDS longitudinal intervention. The research involved an “autonomy questionnaire,” as well as anthropometric and demographic measures. Data analysis involved factor analysis followed by regressions. The authors conceptualized “autonomy” as seven dimensions (household decision-making autonomy, child-related decision-making autonomy, financial autonomy, mobility autonomy, freedom of movement, acceptance of domestic violence and experience of domestic violence).

Lessons. (a) Three domains of autonomy correlated positively with child nutritional outcomes: household decision-making, financial autonomy and mobility autonomy – yet none correlated with mothers’ level of education. (b) The authors admit that: “A potential limitation is that we are unable to provide a conceptual framework for why specific domains of autonomy might or might not relate to specific child feeding and nutritional outcomes.” They also suggest it “may be premature to provide such a framework” (although they fail to give a convincing explanation why not). [(c) As is very common in the nutrition literature, the authors are not aware of decades of sociological theory and empirical studies on women’s economic power and gender stratification – work that deals with interrelationships and possible causal sequences among their seven dimensions of autonomy. Such cross-fertilization would seem useful for the nutrition literature.^{22]}

5. Anthropometric Failure and Persistence of Poverty - India²³

²² In this case, studies in the sociological literature indicate that the three dimensions of autonomy that Shroff et al. found positively associated with child nutritional outcomes can be arranged in the following sequence: increased financial autonomy is linked to subsequently greater autonomy in household decision-making and greater mobility autonomy (see, e.g., Blumstein and Schwartz 1991; Blumberg 1984, 1988, 2001).

²³ Gaiha, Rajjiv and Veena Kulkarni. 2005. “Anthropometric Failure and Persistence of Poverty in Rural India.” *International Review of Applied Economics* 19(2):179-197.

Implementing Agency: Data come from a National Council of Applied Economic Research survey; Funding Agency: Not specified; Time Period: The authors of this econometric study used “a nation-wide survey of rural households” conducted by NCAER from January to June, 1994.

Objective. Identify and assess the factors underlying stunting in rural India, based on the 1994 survey. “In particular, an attempt is made to demonstrate that, while income matters, other factors acting independently...have an important role...in determining the prevalence of stunting” (p. 180).

Programmatic Approach. Secondary econometric analysis of nation-wide survey.

Outcome/effectiveness of intervention. First, the authors obtained the same finding as a well-known 1982 study by Rosenzweig and Schultz that (greater) male-female wage differentials are linked to stunting. Other factors that also matter include household size, whether household head is male, caste affiliation, access to drinking water, hygiene and sanitation facilities, mother’s marriage age, age composition of children, and prices of food items (ibid.). Some of the results of note involve gender of parent: 1. Although there were small differences by caste, landholding and income level, prevalence of stunting “is much higher among male-headed households. This holds equally for both boys and girls” (p. 185). 2. Severe stunting falls with rising marriage age of the mother (it’s highest among the mothers who married youngest). 3. In a simulation, the authors found that doubling per capita income reduces stunting by barely 6.98 percent, whereas if women do not marry before age 20, stunting will fall by 15.54 percent (easy access to drinking water, toilets and ventilated kitchens and, especially, reductions in fertility had an even stronger effect). The same simulation for severe stunting found that eliminating the male-female wage differential reduces it significantly – and if all households were changed to female-headed, it falls even more.

Methods via which intervention was evaluated. The original 1994 survey involved a sample of 35,130 households spread over 1765 villages and 195 districts in 16 states. The villages were chosen after being arranged in order of rural female literacy. Stratum 1 was comprised of households with at least one pregnant woman; Stratum 2 involved households with at least one child aged less than 12 months but no pregnant women. All remaining households were stratified according to religion, ethnic group and occupation of head of household. The authors’ analysis created a micro-economic framework to assess the causal roles of various factors in stunting, the dependent variable.

Lessons. (a) The conclusion (as summarized in the Abstract) is, essentially, the main lesson: The authors note that while higher incomes will help mitigate stunting, careful attention must also be given to enhancing women’s autonomy through more remunerative employment opportunities for them, enabling households to improve hygiene and sanitation facilities, and facilitating more competitive local markets for food (p. 179). [(b) The fact that female-headed households, the great majority of which have less income than their male counterparts, may have better nourished children is again demonstrated empirically and this time in South Asia. Women heading households are generally considered to have greater control of economic resources and more autonomy than women living in male-headed households and here it is manifested in less

stunting among their children. Also, the study empirically documents the pernicious harm of early marriage and early childbirth by typically anemic and underweight girls. This is an area for more policy and programmatic attention and interventions.]

6. Comparing Food and Cash Transfers to the Ultra Poor - Bangladesh²⁴

Implementing Agency: IFPRI; Funding Agency: World Food Programme (WFP); Time Period: Fieldwork in 2007, after all four programs assessed had been implemented.

Objectives: (1) to establish the relevance of food and cash in enhancing food security of the ultra poor, especially women and children, in a sustainable fashion through overall improvements in livelihoods; (2) to inform and guide the ongoing social protection policy formulation exercise; and (3) to guide the formulation of effective program implementation strategies for the WFP in Bangladesh.

Programmatic Approach: The study assessed four programs that provided food, cash, or a combination, to 830,840 ultra poor beneficiaries with 3.72 million family members in 2006. Two involve food and/or money for work: Food for Asset Creation (FFA) and Road Maintenance Program (RMP). FFA gives a combination of food and cash to its 70 percent female/30 percent male participants but RMP gives all cash to its 100 percent female participants. Two are part of the Vulnerable Group Development (VGD) program and have no work requirements: the Income Generating VGD (IGVGD) and the Food Security VGD (FSVGD), both targeting only women. IGVGD women get food rations and built-in microcredit access and FSVGD women get a combination of food and cash. FFA and RMP benefits average about twice as much as those of the two VGDs.

Outcome/effectiveness of intervention: The study shows that these transfers from safety-net programs in Bangladesh played an important role in improving food security and protecting and expanding the asset bases of poor households, and that the programs proved fairly well targeted, although their alleviation impacts might be only temporary. Among specific findings of note: 1. Most participants expressed a preference for the type of transfer provided by the program in which they participated. In addition, the poorest preferred only food, the better off preferred only cash, and preference for a cash-food combination was unrelated to household income. 2. Over and above the transfers, participants received training in income-generating activities (IGA), as well as increased awareness concerning nutrition, health, social and legal issues; literacy training also was offered. IGA training proved most effective (a majority started IGAs) and literacy least (no increase after 18 months). 3. Concerning **nutrition:** There was no increase in calories by preschool children in any of the four. Only RMP, with payments 70 percent higher than IGVGD and FSVGD, had increases in calories by school-age and older individuals, and they appear evenly split between men and women. The one program (FSVGD) providing *atta*, a fortified wheat flour that was less preferred than rice, increased women's share of food; IGVGD

²⁴ Ahmed, Akhter U., Agnes R. Quisumbing, Mahbuba Nasreen, John F. Hoddinott, and Elizabeth Bryan. 2009. *Comparing Food and Cash Transfers to the Ultra Poor in Bangladesh*. Washington, DC: IFPRI.

and FFA provided (preferred) rice and gave a bigger boost to men's than women's calories. 4. Concerning **women's empowerment**: The qualitative research indicated that women felt empowered. The quantitative household survey data show that RMP and FFA, the two programs that offered the biggest payments and challenged norms of women's seclusion, had the greatest impacts on women's decision-making and mobility. But IGVGD had the greatest impact on obtaining credit (it was part of the program). Married women got more empowerment the higher the proportion of transfers received in cash: it enabled them to control resources they previously were unable to control and to expand their area of decision-making beyond traditional roles. For widows, divorced and separated women, however, having both food and cash transfers assured food for the household as well as cash for other expenditures, since most were sole supports of their families. 5. It is cheaper to transfer cash than food.

Method via which intervention was evaluated. The primary method was a household survey (N=2,000, including 300 from each of the four programs, 400 ex-participants and 400 as a control group). It used "propensity score matching" (PSM) to match beneficiaries and non-beneficiaries since the implementation had finished before the IFPRI study was carried out. They also used key informant interviews and focus group discussions in a qualitative component.

Lessons. (a) Size of transfer clearly matters, and so does access to microcredit and savings. (b) The biggest increase in food security of the ultra poor, especially women, was with the micronutrient-fortified (but not very popular) *atta* wheat flour. (c) Married women in public works programs had greater empowerment when they earned and controlled cash incomes, possibly because it allowed them to expand their area of decision-making beyond traditional food provider/caregiver roles. Their work may have contributed to their greater sense of ownership of income earned, causing them to seek a bigger say in decision-making and to become more independent. Their providing income to the household may have increased family members' appreciation and made husbands more willing to consult them in household decisions and less opposed to their independence. (d) But qualitative data found that women felt they had greater control over food transfers and worried that cash transfers would be spent by husbands. (e) These intra-household changes, however, may not translate to changes at community level, especially where gender norms are most traditional about gender seclusion and women doing manual labor. [(f) The RMP provided all-cash – and more of it – than any other program. It helped married women the most in increasing their household decision-making in non-traditional areas; it also provided very non-traditional work that raised women's mobility over and above any additional increase stemming from the income they earned. The authors note the fact that this led to community criticism. The next study takes a more pro-active approach to community concerns about projects that go beyond traditional norms about women's (appropriate) roles.]

7. Cross-cutting Issues: Governance and Gender - Bangladesh²⁵

Implementing Agency: IFPRI, Bangladesh Institute of Development Studies. Funding Agency: USAID, DIFD and European Commission. Time Period: The paper was prepared by two IFPRI

²⁵ Birner, Regina, Agnes R. Quisumbing, and Nazneen Ahmed. 2010. "Cross-cutting Issues: Governance and Gender." Dhaka: Bangladesh Food Security Investment Forum. (Paper for a Food Security Investment Forum)

researchers and one from the Bangladesh Institute of Development Studies for the Bangladesh Food Security Investment Forum, May 26-27, 2010.

Objective. The paper reviews gender and governance issues relevant to the four themes of the Forum: (1) agricultural growth, productivity and climate change; (2) markets, trade and value chains; (3) income generation and social protection, and (4) nutrition security. For each theme, the paper considers (a) gender and governance issues, (b) efforts to address them and what worked/did not work and why, and (c) recommendations.

Programming Approach. NA

Outcome/effectiveness of intervention. The most relevant parts of the paper concern gender issues in nutrition security. Based on their review, the authors argue that “Addressing gender inequality is...central to reducing malnutrition in Bangladesh. However, even if nutrition programs target women, most...do not take into account women’s lack of access to or control of their own resources” (p. 15). They reiterate this in their discussion of “provisions in policy documents to address gender issues,” stating: “even as the targets of interventions, if women do not control household resources they may not have the ability to direct these resources toward child health and nutrition” (p. 16).

Method via which intervention was evaluated. Review of relevant literature, statistical data, and project reports documenting previous experience with interventions in the four areas covered in the paper.

Lessons. With respect to nutrition security (Theme 4), their lessons are that it is essential to: (a) Improve women’s nutrition and health in order to improve the nutritional status of the population, (b) Build community support for women’s empowerment within their communities, and (c) Adopt innovative approaches to shift social norms related to early marriage and child-bearing and to promote support within the home during and after pregnancies.²⁶ (d) Additionally, where there is resistance to raise women’s low status, strategies to promote children’s nutritional status must include actions to mitigate the negative effects of power inequalities favoring men. [(e) Their lessons (b)-(d) make a compelling prescription for new intervention strategies. Moreover, (d) pushes the envelope for nutrition programming, even though they don’t say just what actions must be taken to “mitigate the negative effects of power inequalities favoring men.” Nor do they mention a possible complication arising from women earning and controlling resources that could improve their children’s nutrition: the extra time it may take and the fact that most of these poor women may already be working to physiological limits. The next study illuminates this issue.]

²⁶ The authors don’t specify how this may be done. Based on the research on women’s economic empowerment presented in the Overview above, a good strategy seems to be turning the young girl from an economic liability to an asset, e.g., by training teen girls in income-generating activities and (if feasible) giving them access to microcredit. In the Ecuador example above, when adolescent girls became sources of additional income for the household, parents actively urged them to delay getting married.

8. Credit with Education for Women - Mali²⁷

Implementing Agency: CANEF (Centre d'Appui Nutritionnel et Economique aux Femmes, Bamako, Mali and Freedom from Hunger, Davis, CA, USA; Funding Agency: USAID; Time Period: CANEF made the first loans in 1989; the Credit with Education (CWE) project had been operating 4-5 years when this study was undertaken.

Objective. "Assess the targeting aspects of CWE, its impact on women's income and, hence, its impact on nutrition status of the women and their preschoolers via its impacts on women's income" (p. 13).

Programming Approach. The Credit with Education model provides credit for women as well as nutrition education. The emphasis of this research was on the impact of the women's income in improving adult female and preschooler nutrition, even controlling for overall household income levels.

Outcome/effectiveness of intervention. The findings of the quantitative analyses indicated that (1) CANEF credit is fairly well targeted to women in poorer households but targeting could be improved; (2) Credit recipient women with no preschoolers increased their incomes but women with preschoolers did not; Women from the poorest CANEF households may have had a decline in nutrition status with increased own income (a statistically weak result), and (4) Preschooler nutrition status (WAZ) was positively associated with CANEF credit in Round 2. Overall, 86.3 percent of direct recipients rated the credit as good/very good; 82.6 percent said the same about the nutrition education. Moreover, the qualitative data indicated that these women felt empowered in terms of access to income-generating activities.

Method via which intervention was evaluated. The researchers used the data from their 1993 investigation. Over a seven-month period, three rounds of survey and anthropometric research were carried out in a random sample of 102 households from CANEF villages and 98 from non-CANEF villages.

Lessons. (a) One conclusion is that CWE may be reaching women in the poorest households but not with the correct mix of complementary inputs for maximum effectiveness. This is because time is a big component of the input mix. But women with preschoolers might not have the time to take advantage of the income-generating opportunities afforded by the loans. (b) In addition, women from the poorest households might be stretched so tightly in terms of time in work that they may have to sacrifice their own nutrition status in order to generate income. This leads to (c) the need to examine the nature and magnitude of extra time burdens (if any) imposed by the CWE project and the income-generation opportunities it affords. [(d) There are a few mentions of women's time constraints in the nutrition literature. This study brings the issue to the forefront. If gender-inclusive nutrition programs focus on raising women's economic empowerment and autonomy at the household level, they also may open the door to women self-

²⁷ De Groote, Hugo, Eileen Kennedy, Ellen Payongayong, and Lawrence Haddad. 1996. *Credit with Education for Women in Mali: Self-Selection and Impacts on Women's Income, with Implications for Adult Female and Preschooler Nutrition*. Washington, DC: IFPRI.

exploiting, adding more work to an already crushing load, with negative consequences to their own health and nutrition and possibly those of their children. And there are empirical studies of women choosing that path in order to earn extra income for their families, dating back to Henn's 1988 econometric study in Cameroon.²⁸ It would seem that "gender-inclusive nutrition interventions" that aim to raise women's income should consider their time – and, where possible, seek out tie-ins with relevant local programs (e.g., those bringing potable water closer to women's homes, promoting improved cookstoves to reduce their time fetching wood (while reducing the amount of wood consumed and harmful indoor pollution generated), or providing appropriate technology processing machines for crops such as cassava that entail laborious hand processing by women).]

9. Homestead Food Production Model – Bangladesh, Cambodia, Nepal and Philippines²⁹

Implementing Agency: Helen Keller International; Funding Agency: Same; Time Period: 2003-2007.

Objective. To increase and ensure year-round availability and intake of micronutrient-rich foods in poor households, particularly by women and children.

Programmatic Approach. HKI has been adapting its Homestead Food Production Program (HFPP) in the four countries since the late 1990s. HFPP gives inputs, knowledge and skills for both gardens and nutrition to women from poor households. Village Model Farms (VMF) are set up with local partner NGOs; each VMF serves two women's groups of ~10 households, with inputs to both the VMF and women provided at baseline by the program. Each woman establishes a home garden for vegetables and fruits; "developed gardens" (the highest type) produce a wide variety year-round. Three years of aid are given. Links are made with local health and agriculture agencies and local partners' capacities are raised so that technical assistance continues after the three year cycle.

Outcome/effectiveness of intervention: Evaluations of participating households showed improved availability and consumption of vegetables, fruits, and, to a lesser extent, animal products such as eggs and liver; anemia decreased among women and children 6-59 months, significantly in Bangladesh and Nepal. Household income increased as a result of homestead food production activities, especially vegetables and fruit (e.g., in Cambodia, the average two-

²⁸ Henn found that women in a village that got a road added 4.6 hours/week to their workload to raise and process perishable vegetable crops that suddenly had timely access to markets; they did this even though they already worked twice as many hours as the men – but it gave them more than double the cash income earned by women in another village in the same zone that did not get a road.

²⁹ Helen Keller International. March 2010. "Homestead Food Production Model Contributes to Improved Household Food Security, Nutrition and Female Empowerment - Experience from Scaling-Up Programs in Asia (Bangladesh, Cambodia, Nepal, and Philippines)." *Nutrition Bulletin* 8(1):1-8.

month increase was from US\$3.75 to US\$17.50 and in Bangladesh, the one-month increase was from US\$0.62 to US\$1.25). Concerning women's empowerment, by the end line survey in Bangladesh, Cambodia and Nepal, women managed food production in 73 percent of households, with women deciding which crops to plant and how income earned from surplus produce was spent. Women's involvement in household decision making also improved.

Method via which intervention was evaluated. Survey data were collected through multi-stage cluster sampling from a representative sample of program households and control households. The baseline was in 2003 and end line surveys took place from 2006-2007.

Lessons. (a) Concerning women's empowerment, the evaluation concludes that "control over HFPP resources and income is likely a key factor in how the...program has enhanced women's participation in household decision-making" (p. 6). (b) In addition to being able to improve gender equality in households, the HFPP has demonstrated positive impact on nutrition in all four countries. HFPP is economically feasible and culturally acceptable, making the model sustainable. (c) HFPP can help reduce poverty and the program has the potential to be expanded. [(d) Given these results, a case might be made that the model should be integrated into a wide array of comprehensive nutrition interventions – with some attention to possible time constraints. Still, a note of caution was sounded by one reviewer of an earlier version of this paper: he said that some non-HKI homestead garden programs that were smaller initiatives than those of HKI had proven less successful. Thus far, however, references to these less positive interventions have not been located by him or the authors of this paper.]

APPENDIX 2: INTERVENTIONS TO INCREASE HOUSEHOLD SUPPORT

10. Use of Health Services in Conditional Cash Transfer Programs³⁰ - Nicaragua, El Salvador, Mexico and Turkey

Implementing Agency: Various; Funding Agency: Various; Time Period: from 1997-2008.

Objective. Empirical study to evaluate the effectiveness of CCT Programs for mother-child health in Latin America and Turkey.

Programmatic Approach. CCTs provide regular cash grants for families, normally given to the mother, conditioned on family members' participation in preventative maternal and child health and nutrition services (as well as children's attendance in school).

Outcome/effectiveness of intervention. CCTs can have the intended impacts, but the pathways are more circuitous than often assumed. The health education components of CCTs are found to be critical.

Method via which intervention was evaluated. Primary data were collected through qualitative field studies which were part of independent evaluations carried out for the government of each of the four countries (Turkey, Nicaragua, El Salvador and Mexico). The evaluations also included quantitative panel studies.

Lessons. "Gender roles, norms, and relations are powerful sociocultural drivers, which strongly influence how people perceive and respond to the CCT. CCT programs, in focusing exclusively on women with respect to conditionalities and education, have largely not addressed the considerable influence of men in the outcomes of the health components of the program" (1926). "While CCT programs work on the assumption of rational economic behavior, in reality people act according to a 'conditional rationality' shaped by multiple constraints, experiences, and preferences" (1928). These factors may include gender, religion, embarrassment and shame, illiteracy, and class/cultural divides.

³⁰ Adato, Michelle, Terry Roopnaraine and Elisabeth Becker. 2011. "Understanding Use of Health Services in Conditional Cash Transfer Programs: Insights from Qualitative Research in Latin America and Turkey." *Social Science & Medicine* 72(12):1921-1929.

11. Effects of a Conditional Cash Transfer Program on Child Nutrition - Brazil³¹

Implementing Agency: Government of Brazil; Funding Agency: Government of Brazil; Time Period: 2001-2003.

Objective. BFP (*Bolsa Familia* Program) seeks to invest in human capital by associating cash transfers with educational goals and uptake of health services.

Programmatic Approach. The *Bolsa Familia* is the world's largest CCT, covering all 5564 municipalities in all 27 states. It has about 11 million families enrolled, roughly 46 million people, ~25 percent of Brazil's population. Once a family enrolls, it must comply with certain health and education conditions to remain in the program: (1) a minimum school attendance of 85 percent of the monthly school hours for children 7 to 17 years old, and (2) a health and nutrition agenda for beneficiary families with pregnant women, nursing mothers or children under 7 years of age (pre-natal care, vaccination, health and nutrition surveillance).

Outcome/effectiveness of intervention. Children from families exposed to the BFP were 26 percent more likely to have normal height for age than those from non-exposed families; this difference also applied to weight for age. No statistically significant deficit in weight for height was found. Stratification by age group revealed 19 percent and 41 percent higher odds of having normal height for age at 12–35 and 36–59 months of age, respectively, in children receiving *Bolsa Familia*, and no difference at 0–11 months of age.

Method via which intervention was evaluated. “Data collected in 2005-2006 for 22,375 impoverished children under 5 years of age were employed to estimate nutritional outcomes among recipients of *Bolsa Familia*” (496).

Lessons. “The cash transferred can immediately translate into the exercise of minimum social rights with respect to food, clothing, transportation and less fundamental goods and services” (500). [Note: gender factors were not considered in this analysis, although it is noted that most CCT payments go to the woman of the family.]

³¹ Paes-Sousa, Romulo, Leonor M. P. Santos and Édina S. Miazaki. 2011. "Effects of a Conditional Cash Transfer Programme on Child Nutrition in Brazil." *Bulletin of the World Health Organization* 89(7):496-503.

12. Does It Matter Whether Public Cash Transfers are Given to Women or Men? - Mexico³²

Implementing Agency: PROGRESA; PROCAMPO; Funding Agency: Government of Mexico; Time Period: 2002.

Objective. The paper evaluates the impact of two quite different cash transfer programs in rural Mexico. PROCAMPO targeted farmers, with male landowners as the primary recipients, some of them poor; PROGRESA targeted poor women, in the belief that they would spend more on children's health and education. The women's cash transfers were conditional on school attendance by children, basic health checkups by all family members and attendance at public health lectures. The authors assess gendered outcomes of the two programs on consumption, investment, schooling and health care.

Programmatic Approach. Cash transfers aimed at very different groups by two different programs.

Outcome/effectiveness of intervention. Both programs led to increases in consumption, PROGRESA immediately and PROCAMPO with a greater time lag, because it boosts agricultural investments and needs time to produce its benefits. Thus, the increase in consumption may happen through different channels. They also found that cash transfer programs targeted to men are beneficial only when the recipients own means of production.

Method via which intervention was evaluated. For PROGRESA, they use Census data and the program's experimental design in which communities were randomly allocated to treatment and control groups. PROCAMPO is a few years older and its sample was not chosen to minimize selection and program placement bias. Therefore, they use econometric techniques to minimize these potential sources of bias.

Lessons. The authors twice emphasize that men don't spend all the money they receive on alcohol; rather, both programs increase total and food consumption. PROGRESA, however, boosts school enrollment when paid to women but not when paid to men. PROCAMPO also boosts school enrollment but not by as much. They attribute gender differences to a combination of gender and program design.

³² Davis, Benjamin, Sudhanshu Handa, Marco Stampini and Paul Winters. 2002. "The Lure of Tequila and the Bestowing of Motherly Love: Does It Matter Whether Public Cash Transfers are Given to Women or Men? Evidence from the PROGRESA and PROCAMPO Programs in Rural Mexico." Paper presented at the Xth EAAE Congress, Zaragoza, Spain, August.

13. Large-scale Application of Nutrition Behavior Change - Burkina Faso, Mali and Niger³³

Implementing Agency: Academy for Educational Development (AED); Funding Agency: USAID; Time Period: 1987-1995.

Objective. “To assist USAID missions, host country institutions, and non-governmental organizations throughout the world to create, implement, and evaluate efforts to promote better nutrition using modern communication methodologies.” There were four behavioral objectives: improve the diet of pregnant and lactating women, promote exclusive breastfeeding followed by consumption of nutrient-rich complementary foods, treat childhood illness, and encourage prenatal visits and nutrition promotion sessions at health centers (p. 6).

Programmatic Approach. This comprehensive behavior change program used mixed media such as radio and drama series, supplied health workers with educational materials to use during monitoring sections and included an educational component specifically for men which stressed father’s responsibility for proper nutrition.

Outcome/effectiveness of intervention. Evaluations from the three countries (Burkina Faso, Mali and Niger) produced mixed results. On the one hand, some key messages were poorly assimilated, and trainings were sometimes poorly attended. On the other hand, some evidence emerged of improvement in nutrition status of children in target areas. The media outreach portion of the intervention, which included radio and drama programs, was remarkably popular and successful, especially in reaching rural populations and men. (In Mali, the protagonist of the most popular program (“Elephant of the Desert”) was a recalcitrant father who, with the advice of the community health agent and various meddling village characters, begins to practice good nutrition, getting his family on the “road to health.”)

Method via which intervention was evaluated. Surveys and interviews in intervention provinces in the three countries were conducted in late 1994.

Lessons. Some key messages did not have enough exposure due to delay in project implementation, but the success of the media communication initiative warrants further attention as it provided a cost-effective way to reach men and those in rural areas.

³³ Parlato, Margaret and Renata Seidel. 1998. *Large-scale Application of Nutrition Behavior Change Approaches: Lessons from West Africa*. Arlington, VA: The Basic Support for Institutionalizing Child Survival (BASICS) Project.

14. Strengthening Grandmother Networks to Improve Community Nutrition - Senegal³⁴

Implementing Agency: Christian Children's Fund; Funding Agency: Christian Children's Fund; Time Period: 1998.

Objective. Most maternal and child health (MCH) programs focus exclusively on women and children, but grandmothers and other older women play a leading role in all household MCH decisions and activities. Accordingly, the objective was to empower grandmothers, acknowledge their role, improve their knowledge and skills, and strengthen their networks of friendship and solidarity with other grandmothers.

Programmatic Approach. A participatory nutrition education strategy was used. It consisted of a series of group sessions with grandmothers, community leaders both male and female, and community health volunteers. Sessions often involved the use of simple songs, stories, and group discussion. Also, the approach included a follow-up and reinforcement of the nutrition topics.

Outcome/effectiveness of intervention. Over time, grandmothers demonstrated overwhelming interest and enthusiasm for being involved. Their reaction seemed to reflect a deep sense of pleasure and satisfaction. There was a significant increase in the grandmothers' knowledge of recommended nutrition practices as well as increased empowerment and social networks.

Method via which intervention was evaluated. Quantitative and qualitative data were gathered; pre- and post-pilot interviews were carried out.

Lessons. The authors conclude that the greatest obstacle to improving the contribution of grandmothers to MCH does not come from grandmothers but from international and national health organizations which ignore the potential that grandmothers have to act as experienced and committed health providers.

15. Hearth Nutrition Model - Haiti, Vietnam and Bangladesh³⁵

Implementing Agency: BASICS, World Relief Corporation; Funding Agency: USAID; Time Period: early 1990s.

³⁴ Aubel, Judi, Ibrahima Touré, Mamadou Diagne, Lazin Kalala, El H. A. Séne, Yirime Faye and Mouhamadou Tandia. 2001. "Strengthening Grandmother Networks to Improve Community Nutrition: Experience from Senegal." *Gender and Development*, July, OXFAM.

³⁵ Wollinka, Olga, Erin Keeley, Barton R. Burkhalter and Naheed Bashir. 1997. *Hearth Nutrition Model: Applications in Haiti, Vietnam, and Bangladesh*. Arlington, VA: U.S. Agency for International Development, World Relief Corporation and Basic Support for Institutionalizing Child Survival (BASICS) Project.

Objective. Emphasis is on energizing volunteer mothers to rehabilitate malnourished children using local, affordable, nutritious “positive-deviant” foods for two weeks in the context of a growth monitoring and counseling program. The visible change in children is a powerful motivator for mothers to continue good feeding practices. Hearth programs are meant to be supported by other health programs.

Programmatic Approach. A two-week-long educational program that involves intensive and interactive training was held in local communities, followed by a weigh-in immediately following the program and four and eight weeks later. Can vary slightly by country (see page 29).

Outcome/effectiveness of intervention. Results from Haiti indicate that while short-term rehabilitation of malnourished children is highly motivating to mothers, the most important long-term impact is the prevention of nutritional deterioration in mildly malnourished children.

Method via which intervention was evaluated. This was a one year impact study using a quasi-experimental panel design; includes health measurements.

Lessons. Hearth programs alone may not be effective in treating severely underweight children. Rather, a combination of Hearth and growth monitoring programs (GMP) appear to be complementary. Hearth did appear to be successful in recruiting community volunteers and motivating them to remain active. In addition, it is relatively cost effective (Wollinka et al. 1997).

APPENDIX 3: INTERVENTIONS TO INCREASE COMMUNITY SUPPORT

16. The Hunger Project - Bangladesh and India³⁶

Implementing Agency: The Hunger Project; Funding Agency: The Hunger Project; Time Period: Their South Asia Initiative was launched in 2000.

Objective. Empowering women and reducing inequality to help end the cycle of hunger and malnutrition.

Programmatic Approach. The focus is on mobilizing village “clusters” through bottom-up training and organization of volunteers. The “South Asian Initiative” was launched in 2000 “to empower grassroots women in Bangladesh and India to become effective change agents for ending hunger and poverty in their villages” (p. 1). Programs in India and Bangladesh utilize networks of women “animators” and local elected officials: the *union parishads* in Bangladesh and the women elected to the *panchayats* in India, who then bring water, health and education to their villages.

Outcome/effectiveness of intervention. This is a description of their “South Asian Initiative” intervention strategy, not an evaluation. In Bangladesh, they have over 130,000 “animators” (volunteer leaders) who mobilize their communities, initiating development projects, e.g., income-generating activities and educational programs on nutrition and sanitation. In India they implement this strategy in nine states, in over 3,000 village clusters (representing about 12,000 villages), supporting the leadership of more than 95,000 women elected at the local level.

Method via which intervention was evaluated. Not applicable.

Lessons: The organization hopes to build on its existing networks (e.g., in India, they implement their strategy in partnership with about 50 community-based organizations), and also partner with other organizations in the region.

17. Intensive Nutrition Education - Indonesia³⁷

Implementing Agency: Church World Service in partnership with Government of Indonesia; Funding Agency: Same? Not specified; Time Period: 2000.

³⁶ The Hunger Project. 2010. *The Hunger Project in South Asia: Villages that Work*. New York: The Hunger Project.

³⁷ Inayati, Dyah A., Veronika Scherbaum, Ratna C. Purwestri, Nia N. Wirawan, Julia Suryantana, Susan Hartono, Maurice A. Bloem, Rosnani V. Pangaribuan, Hans K. Biesalski, Volker Hoffman and Camilla Bellows. 2012. “Improved Nutrition Knowledge and Practice through Intensive Nutrition Education: A Study among Caregivers of Mildly Wasted Children on Nias Island, Indonesia.” *Food and Nutrition Bulletin* 33(2):117-127.

Objective. To provide caregivers with necessary knowledge to help them modify their feeding practices.

Programmatic Approach. Two approaches were used: The Intensive Nutrition Education (INE) used culturally adapted interactive teaching materials such as pictures. Trained community help workers facilitated weekly participatory nutrition sessions. The non-intensive nutrition education (NNE) approach did not include the INE training, but workers had basic nutrition education training provided by the government.

Outcome/effectiveness of intervention. In comparison with NNE, the INE approach was significantly better in bringing about a positive change in knowledge and practice of caregivers of mildly wasted children in the study area.

Method via which intervention was evaluated. The evaluation compared intensive nutrition education (INE) with non-intensive nutrition education (NNE) in an experimental design. Respondents answered a questionnaire regarding their familiarity with nutritional terms and signs and symptoms of disease as well as knowledge and practice of child feeding.

Lessons. Intensity and frequency of meetings, as well as an atmosphere conducive to discussion and group participation, and culturally adapted educational materials were key factors in its success. Regular exposure to a few simple messages is most effective.

18. Integrated Management of Childhood Illness - Bangladesh³⁸

Implementing Agency: UNCF and WHO; Funding Agency: Same; Time Period: Mid-1990s.

Objective. To improve child survival and development, and guarantee health care to all children by addressing gaps in knowledge, skill, and community practices regarding children's health.

Programmatic Approach. Integrated management of ill children in health facilities, strengthening of health system, and promotion of key family and community practices.

Outcome/effectiveness of intervention. Fully 94 percent of health workers in intervention

³⁸ Arifeen, Shams E., Lauren S. Blum, D. M. E. Hoque, Enayet K. Chowdhury, Rasheda Khan, Robert E. Black, Cesar G. Victora and Jennifer Bryce. 2004. "Integrated Management of Childhood Illness (IMCI) in Bangladesh: Early Findings from a Cluster-Randomised Study." *The Lancet* 364(9445):1595-1602. [Note: IMCIs have been implemented in more than 100 countries; this evaluation covers only Bangladesh. The IMCI methodology is not gender-sensitive and not particularly effective, but because IMCI initiatives have been such a staple of top-down government approaches to child survival and health, it is included.]

facilities were trained in IMCI. Health system supports were generally available, but implementation of community activities was slow. The results showed a small increase in sick children being taken to a health worker compared to non-IMCI areas.

Method via which intervention was evaluated. A randomized survey was conducted in IMCI and non-IMCI areas. Data on use of health facilities were recorded.

Lessons. Qualitative research and monitoring is needed to ensure continued improvement of intervention and delivery strategies. Full, active collaboration among multi-disciplinary teams of scientists and government health decision makers is also needed. [Note: Neo-natal care was since added to the model, raising its reach and likely impact.]

19. Integrated Management of Childhood Illness – Multiple Countries³⁹

Implementing Agency: UNCF and WHO; Funding Agency: Same; Time Period: Mid-1990s.

Objective. To improve child survival and development, as well as guarantee health care to all children by addressing gaps in knowledge, skill, and community practices regarding children's health.

Programmatic Approach. Integrated management of ill children in health facilities, strengthening of health system, and promotion of key family and community practices.

Outcome/effectiveness of intervention. Results indicate that some of the basic expectations for implementing IMCI were not met. Four of the five countries had difficulty implementing the program at the national level while maintaining quality.

Method via which intervention was evaluated. In-depth assessments were conducted in 12 countries, including review of country-level plans and progress in child health activities.

Lessons. There must be greater accountability for implementation at the population level. Global strategies should be complemented by country-specific guidelines that begin at the local and community level.

³⁹ Bryce, Jennifer, Cesar G. Victora, Jean-Pierre Habicht, Robert E. Black, Robert W. Scherpbier and on behalf of the MCE-IMCI Technical Advisors. 2005. "Programmatic Pathways to Child Survival: Results of a Multi-Country Evaluation of Integrated Management of Childhood Illness." *Health Policy and Planning* 20(suppl 1, December):i5-i17. [Note: This is another example of the traditional top-down government approach that was not effective and did not include gender; this one includes countries outside South Asia.]

20. Baby-Friendly Hospital Initiative – Multiple Countries⁴⁰

Implementing Agency: UNICEF and WHO; Funding Agency: Same; Time Period: Launched in 1991-92.

Objective. The initiative is a global effort to implement practices that protect, promote and support breastfeeding.

Programmatic Approach. It uses a multi-level approach, including national breastfeeding and child feeding policies, scale-up of intervention from hospitals to breastfeeding support groups, providing support to HIV-positive mothers, and supporting research on HIV and infant feeding.

Outcome/effectiveness of intervention. BFHI implementation was associated with average annual increases of 1.54 percent in the rate of EBF (exclusive breastfeeding) under 2 months and 1.11 percent in the rate of EBF of infants under 6 months.

Method via which intervention was evaluated. Recent Demographic and Health Surveys (DHS) and UNICEF BFHI Reports from 14 countries were utilized. Pre- and post-implementation time periods were analyzed.

Lessons. There is little evidence that BFHI provides substantial positive change, but more data are needed and a number of suggestions for improvement are offered.

21. Baby Friendly Community Initiative – The Gambia⁴¹

Implementing Agency: Nutrition Unit of the Gambia Dept. of State for Health (Semega-Jannah was then its head); Funding Agency: Same; Time Period: Pilot project was initiated in 1993.

Objective. The Baby Friendly Community Initiative (BFCI) aimed to improve infant feeding practices in rural Gambia by getting 25 percent of mothers to practice exclusive breastfeeding for

⁴⁰ World Health Organization. 2009. *Baby-Friendly Hospital Initiative: Revised, Updated and Expanded for Integrated Care*. Geneva, Switzerland: World Health Organization and UNICEF. Abrahams, W. S. and H. M. Labbok. October 2009. "Exploring the Impact of the Baby-Friendly Hospital Initiative on Trends in Exclusive Breastfeeding." *International Breastfeeding Journal* 4(11):11-16. [Note: This is a top-down approach to supporting breastfeeding and improving breastfeeding practices that is only modestly effective and does not have an explicit gender focus.]

⁴¹ Semega-Jannah, Isatou Jallow. 1998. "Breastfeeding: From Biology to Policy." The second Abraham Horwitz Lecture, presented at the ACC/SCN Symposium, Oslo, March 30-April 1. Published as Chapter 9 in *Challenges for the 21st Century: A Gender Perspective on Nutrition through the Life Cycle – Nutrition Policy Paper No. 17 (Papers from the ACC/SCN 25th Session Symposium, Published November 1998)*. [Note: Although based on the Baby-Friendly Hospital Initiative (BFHI), this pilot project adapted that top-down model to a bottom-up, truly community-based approach (BFCI) with much greater success.]

at least 4 months and getting 90 percent of mothers with normal delivery to initiate breastfeeding within an hour of delivery.

Programmatic Approach. The project adapted the UNICEF/WHO Baby Friendly Hospital Initiative (BFHI) of 1991 to a community-based focus, using a participatory, integrated methodology based on the BFHI “10 Steps.” But the project agenda went beyond breastfeeding to include nutrition, weaning, environmental sanitation and personal hygiene. Village support groups were created of five women (including the traditional birth attendant) and two men. They were nominated by the community and received no compensation but great prestige. They were trained by first discussing their traditional knowledge on a topic, then hearing the scientific knowledge, then discussing and ultimately accepting the latter. (They then had a graduation ceremony complete with high officials and fancy diplomas; most were illiterate.) To explain exclusive breastfeeding (which almost no one practiced), they used the example of livestock giving their new-born only mother’s milk and they didn’t die; colostrum was renamed from “bad milk” to “protective milk.” They themselves decided how to disseminate information to pregnant/lactating women and their spouses. And they were very innovative, using home visits and village gatherings, frequently singing new songs (of the “10 Steps”), and utilizing dances and role-plays as well. The pilot was carried out in 12 rural villages.

Outcome/effectiveness of intervention. Exclusive breastfeeding became universal. It was initiated within an hour of delivery by 87 percent and within 24 hours by 99.8 percent. Fully 99.5 percent fed only breastmilk at four months, vs. only 1.3 percent before the intervention. The woman and man became concerned with both breastfeeding and maternal nutrition. Traditional shelters in the fields had disappeared but eight were reconstructed by men and women so the mothers could nurse and leave their infants. The previously disapproved practice of expressing and storing breastmilk became normative, permitting rural mothers to practice exclusive breastfeeding for up to six months. Costs to the government were mostly training, retraining and evaluation of the village support groups; the members were “paid” in status as pioneers of a community initiative adapted from a global one. The government began scaling up the BFCI.

Method via which intervention was evaluated. Not specified.

Lessons. (a) 12 fully engaged communities achieved spectacular results in changing traditional breastfeeding practices and long-held conceptions (e.g., that colostrum was “bad milk;” that babies needed water and other liquids in addition to breastmilk; that expressing and storing milk was bad). (b) All this was made possible by unique mixed-sex village support groups that were not remunerated but served enthusiastically for the prestige. (c) The support group participants were trained by first discussing traditional knowledge, then hearing the modern, scientific view, and discussing until they could accept it. (d) The village support groups were very innovative, coming up with engaging, fun methods to spread their messages. (e) There were collateral

benefits, including regular village clean-ups spurred by the sanitation/hygiene messages.

22. Large-Scale Community-Based Programs to Improve Breastfeeding – Multiple Countries⁴²

Implementing Agency: World Health Organization; Funding Agency: World Health Organization; Time Period: 2008.

Objective. This study evaluated ten programs from various countries in order to strengthen new community-based breast feeding interventions and to design new ones.

Programmatic Approach. Information was gathered through document review, questionnaires, and correspondence.

Outcome/effectiveness of intervention. Trends show steady progress in addressing major barriers but sub-optimal practices are still the norm in many countries. Regional differences within countries indicate the need for tailored strategies. Scaling up from pilot programs also proved difficult.

Method via which intervention was evaluated. See Programmatic Approach above.

Lessons. Evaluations of these ten programs reveal tremendous success where programs involve community leaders, facilitate support groups, and use multi-media campaigns to reach a wider audience. Many of these programs show promising results over a short period of time, but need continued reinforcement to be sustained. [Note: Three programs, from Africa, Latin America and Southeast Asia, respectively (with varying results), are summarized below as representative of the larger study. No “superstar” program or interventions that were clearly superior emerged among the ten.]

Benin

a) Programmatic Approach. Community leaders participated in a workshop to help identify community volunteers (*relais communautaires*) for training in the promotion of doable/feasible actions. Youth, traditional singers, and representatives of theatre, women’s, and other community groups participated in workshops to develop messages and materials. Community theatre groups performed dramas in villages and neighborhoods, and community radio stations broadcast spots, games, and dramas developed in the workshops.

⁴² World Health Organization. 2008. *Learning from Large-Scale Community-Based Programmes to Improve Breastfeeding Practices*. Geneva, Switzerland: World Health Organization. [Note: Results from three of the countries (Benin, Bolivia and Cambodia) are presented after the write-up of the overall program.]

Dramas and songs were recorded on audio tapes and provided to local transporters, hairdressing salons, and tailors. Formative research studies and trials of improved feeding practices helped tailor messages to the specific conditions of targeted audiences. These messages were disseminated through a variety of channels. Flipcharts, brochures, and health cards were designed to meet the needs of a largely illiterate audience. Other channels included radio spots aired on local and national stations, audio cassettes, and newspaper articles.

b) Results. Nationwide, the exclusive breastfeeding rate increased from 17 percent in 1996 to 38 percent in 2001 and reached 43 percent in 2006.

c) Lessons. Key factors for success include: political commitment, communication strategies between health facilities and communities using influential individuals, and recommendations for practical and specific action for health workers.

Bolivia

a) Programmatic Approach. Regional training workshops for community health workers included discussions of key messages, role plays, demonstrations, and practice in the use of educational materials in individual counseling and group sessions. The training also focused on practice in negotiating behaviors with mothers in a community setting and implementation of the mother-to-mother support group strategy. The majority of community health workers in Bolivia are men. Many of them schedule home visits for Sundays when husbands are at home. CHWs made more than 800,000 home visits and gave 163,200 educational talks in clinics, community settings, and mothers' clubs. They also participated in local health fairs and referred community members to MOH personnel. Some of the seven partner NGOs initiated mother-to-mother support groups for breastfeeding as one of their BCC strategies. Staff from some partner NGOs received training in mother-to-mother support group facilitation by La Leche League of Bolivia. To support the CHWs in their various activities, PROCOSI/LINKAGES developed six laminated counseling cards and a 12-panel cloth flip chart with images and messages appropriate for each of Bolivia's three eco-regions. Several images showed a man providing support to his wife to breastfeed, such as encouraging her to initiate breastfeeding immediately after delivery and caring for an older child while she breastfeeds the new baby. Calendars reinforced the images and the messages, and CHWs received a manual with information on the messages along with instructions on how to use the educational materials. Partner NGOs used a story/drama video—*A New Life for Tomorrow*—to stimulate discussions at community gatherings.

b) Results. The percentage of infants less than 6 months old that were exclusively breastfed in the program areas (as measured by 24-hour recall) was 54 percent at baseline in 2000 and 65 percent at the close of the program in 2003. However, three years later these rates had decreased dramatically.

c) Lessons. Community-based breast feeding initiatives need to be ongoing to see whether or not they produce long term results. A radio broadcasting campaign can be effective in improving knowledge and behavior in some settings where other program interventions are not available.

Cambodia

a) Programmatic Approach: Health centers participated in creating Mother Support Groups. They helped select “model mothers” and provided group education, and individual counseling, and supervision to MSG members. The village chief coordinated the groups and called the community together. This was complemented by a multi-media campaign. From 2003–2006, the BBC World Service Trust’s Maternal and Child Health Project produced TV, radio, and supporting print materials to convey more than 50 essential health messages, several of them on breastfeeding. Annual radio campaigns on breastfeeding were implemented beginning in 2004, primarily around the time of World Breastfeeding Week. More than 35 health development partners supported nationwide World Breastfeeding Week activities. Five radio spots on breastfeeding complemented TV spots on early initiation of breastfeeding, exclusive breastfeeding, and complementary feeding. TV soap operas, call-in shows, and roundtable discussions also featured breastfeeding. Songs recorded by children encouraging breastfeeding were particularly popular and were sold in local markets for download to mobile phones. Large billboards depicting a breastfeeding woman and baby were placed in town and rural areas.

b) Results: The 2000 Demographic and Health Survey (DHS) conducted in Cambodia found that only 11 percent of infants initiated breastfeeding within one hour of birth, and 11 percent of infants 0–5 months old were exclusively breastfed in the previous 24 hours. Five years later the DHS reported a 24 percent increase in timely initiation rate and a 59 percent increase in exclusive breastfeeding rates.

c) Lessons: Integration of breastfeeding promotion into other health-related initiatives such as the BFHI offers multiple opportunities to reach mothers and children. Media campaigns increased participation and involvement of many different partners and enhanced the effectiveness of the intervention.

23. The Ife South Breastfeeding Project – Nigeria⁴³

Implementing Agency: USAID; Funding Agency: Unknown (USAID?); Time Period: 1997.

Objective. To promote exclusive breastfeeding in rural communities through the training of community health extension workers in rural Nigeria.

⁴³ Davies-Adetugbo, A. and H. A. Adebawa. 1997. "The Ife South Breastfeeding Project: Training Community Health Extension Workers to Promote and Manage Breastfeeding in Rural Communities." *Bulletin of the World Health Organization* 75(4):323-332.

Programmatic Approach. A “training of trainers” approach was adopted. A workshop for the trainers was organized for health workers in the study area; subsequently, these trainers ran district-level training workshops for other health workers.

Outcome/effectiveness of intervention. In the study areas, early initiation of breastfeeding increased compared with control areas; also, trained health workers had significantly better knowledge about breastfeeding and more often made correct recommendations about breastfeeding. Prior to the training, many health workers and community leaders did not express a need to promote breastfeeding in the community, and also revealed incorrect information about how to breastfeed. After the training, both health workers and the local government authority promoted breastfeeding.

Method via which intervention was evaluated. Questionnaires focusing on breastfeeding knowledge and practices were distributed to PHC (primary health care) workers in the study area and in control areas.

Lessons. Exclusive breastfeeding in rural areas is still rare. Because many rural women rely on primary health centers in Nigeria, health worker training makes an important contribution to breastfeeding promotion but more studies are needed in underserved rural communities.

24. Community Nutrition Education - Senegal⁴⁴

Implementing Agency: Government of Senegal; Funding Agency: World Bank and AGETIP (*Agence d’Exécution des Travaux d’Intérêt Public*); Time Period: 1995.

Objective. To halt further deterioration in the nutritional status of children less than three years of age in targeted poor urban areas through nutrition education aimed at initiating changes in attitudes and feeding practices of mothers.

Programmatic Approach. Services were provided in specific buildings called Community Nutrition Centers (CNCs). The project provided targeted children with monthly growth monitoring and promotion and a weekly food supplementation, provided that mothers attended weekly nutrition and health education sessions for six months. The CNP (community nutrition program) also provided children with referrals to health providers and with home visits.

Outcome/effectiveness of intervention. At the end of the follow-up, 61 percent of underweight children recovered, compared to 80 percent expected.

⁴⁴ Gartner, Agnès, Bernard Maire, Yves Kameli, Pierre Traissac and Francis Delpuech. 2006. "Process Evaluation of the Senegal Community Nutrition Project: An Adequacy Assessment of a Large Scale Urban Project." *Tropical Medicine & International Health* 11(6):955-966.

Method via which intervention was evaluated. Monitoring record cards for all participating children were used.

Lessons. Under-coverage was a weakness of the design study and wide discrepancies were observed between CNP centers concerning the utilization and effectiveness of services. [Note: The results point to the need to increase the community's level of involvement in supporting maternal and child nutrition, perhaps as part of more broadly focused interventions that also raise women's economic autonomy and involve men and paternal grandmothers – trends that accelerated after this 1995 intervention.]

25. School Health Programs - Burkina Faso⁴⁵

Implementing Agency: HKI; Funding Agency: UNICEF. Time Period: 2 years before project was evaluated; no other information given.

Objective. The aim of the Helen Keller Institute's "Sustainable Improvement of Nutrition and Food Security in Schools and Communities" project is to test a model for improving the production and consumption of garden produce in schools and communities through the creation of school, women's group and home gardens.

Programmatic Approach. The project's model is innovative in using female village social workers to promote gardening and in its emphasis on setting up a strategy to ensure sustainability. The model involves schoolchildren being used to introduce vegetable gardens into the community. Two women, one older and one younger, are selected as social workers by a village assembly which all groups (including youth, elders, leaders and women) attend. The two village social workers, the teachers, and agriculture extension agents receive training in gardening by Ministry of Education staff and the HKI project coordinator. After training, the social workers train other women, gardening groups and the community, using project-provided bicycles. They organize women's groups to help schoolchildren and teachers water and maintain the school gardens. As per their sustainability strategy, they solicit contributions from the women to maintain the pumps, using some of the revenue the women earn from their sale of surplus garden vegetables. These volunteer women social workers link communities and schools, and relay gardening techniques they learn from the limited number of extension agents. Whether or not they're paid isn't stated [given these two women's job titles and the intensive, time-consuming activities they were said to carry out, however, it's likely they were compensated].

⁴⁵ Sifri, Z., M. A. Bendeck and S. K. Baker. 2003. "School Health Programmes in Burkina Faso: the Helen Keller International Experience." New York: Helen Keller International (see also Baker et al. 2003).

Outcome/effectiveness of intervention. Sustainability depends on the sale of surplus; 14/16 groups have savings accounts in local banks. The social workers helped promote this and also helped groups market their vegetables. After two years, the evaluation found gardens in 15/16 schools, more than 20 group gardens (set up by young men and women’s groups), and home gardens as well. Consumption of vegetables and, more generally, iron and vitamin A-rich foods, rose in both project and surrounding villages, with production of over 52 tons of vegetables during the winter, when fresh garden produce used to be low. Villages with home gardens in over 30 percent of households had lower night blindness prevalence among pregnant women. It cost ~\$2,500/village in the first year and ~\$540 in the second.

Method via which intervention was evaluated. Not specified.

Lessons. (a) The women social workers were an investment that proved very successful and they “received recognition.” [Note: the breakdown of costs doesn’t mention any compensation for these seemingly very demanding, time-consuming jobs; if these women were not paid, there are serious questions regarding how long they might continue doing this, given their own time pressures.] (b) The project generated increasing water needs in a water-starved area; water availability is essential for its continued growth (and for possible scalability) and this may be problematic. (c) “Gardening projects, because their results are both rapid and visible, are very motivating for communities” (p. 60). (d) It is necessary to ensure that seeds, small equipment and technical expertise all are available – and the sustainability strategy agreed to by the community – before project activities begin.

26. Community Nutrition - Benin⁴⁶

Implementing Agency: Government of Benin, ONASA (French acronym for National Bureau for Food Security Support), DANA (French acronym for Food and Applied Nutrition Directorate), 17 unnamed NGOs; Funding Agencies: World Bank, DANIDA; Time Period: 8/04/94-9/30/00.

Objectives. “(a) Carrying out, in areas where populations are at greater risk, simple agricultural, commercial fisheries, peri-urban and socioeconomic activities that would offer new income-generating opportunities and regular access to food; (b) reducing malnutrition rates with particular focus on children under five and on pregnant and lactating women; and (c) strengthening the Government’s food security planning, monitoring, and evaluation capacity to better identify the populations and areas at risk and develop consequent strategies” (p. 2). (Gradually, however, increasing emphasis was placed on the nutrition component.)

⁴⁶ “Implementation Completion Report, Community-Based Food Security Project (PILSA [from its French acronym]).” 2001. Washington, DC: World Bank, Report No. 22031.

Programmatic Approach. This quite complex project had the following original components: (a) Micro-projects, US \$10.7 million; (b) Community Nutrition Program, US \$2.7 million; (c) Institution Building, Management and Monitoring, US\$3.8 million; and (d) Project Preparation (pilot phase), US \$1.9 million. The evaluators note that the project was unavoidably complex, since it was a poverty-oriented rural development project. They add that project complexity was also justified because new institutional arrangements (e.g., working with NGOs) were being tested, alongside new participatory approaches at the community level, during a time period when centrally-planned and Government-driven programs were the norm (p. 3). Most important, the project was preceded by a two-year pilot phase in which the main hypotheses were tested and many of the operational procedures needed to implement the project were developed.

Outcome/effectiveness of intervention. Over 1,300 village and farmer groups benefited (by implementing small subprojects) and – unexpectedly – 60 percent of the beneficiaries proved to be women. The ~1,300 local communities and groups successfully prepared more than 1,500 revenue-generating micro-projects, 15 percent more than projected at appraisal. Most, involving vegetable growing, fish ponds, small-scale trading, etc., were profitable. Surprisingly to the evaluators, 648 (50 percent) of the 1,288 groups in 432 villages were composed entirely of women, and another 306 (24 percent) were mixed groups. The Community Nutrition Component was rated as satisfactory. The 432 villages employed 451 community nutrition workers and ~250 villages acquired “elementary pharmacies.” A total of 36,500 children and more than 13,000 pregnant or lactating women were helped and occurrence of malnutrition in the target areas was reduced to 14 percent (SAR target was 21 percent). The overall reduction of malnutrition was 57 percent vs. a SAR target of 31 percent.

Method via which intervention was evaluated. No overall description is given.

Lessons. Three highlights of the 11 lessons are: (a) Projects aiming at improving food security and nutrition have rarely succeeded or produced lasting results, usually because they addressed only one or two problem factors at a time. Linking of the nutrition and micro-project components with a community approach was essential for the project’s success. (b) The income-generating micro-projects were initially very popular, whereas the socioeconomic, nutrition, and small infrastructure components attracted much less interest. “*Poor people, especially women, proved to be very eager to increase their income immediately* (p. 13, emphasis added). (3) The strong response by women was not anticipated at appraisal (no social assessment had been carried out). [This again shows women’s willingness to pursue income-generating opportunities if they are not barred from participating. Also, since women usually have lower opportunity costs (due to lower income), they may jump at smaller incentives or potential returns than male counterparts (as Henn found empirically in the Cameroon project that built a road to a village; see footnote 28 above). But there was no analysis linking women’s increased income to the improved nutrition.]

APPENDIX 4: INTERVENTIONS TO IMPROVE TARGETING ADOLESCENTS⁴⁷

27. Access to Resources and Influence (Learning Games) - India.⁴⁸

Implementing Agency: Reach India and Freedom from Hunger; Funding Agency: Freedom from Hunger; Time Period: The outcomes assessment began ~November 2009 and assessed 51 Self-Help Promoting Institutions (SHPIs) trained from February-December 2008.

Objective. Program goals were to advance adolescent girls' access to critical social and economic resources through the *Learning Games*.

Programmatic Approach. Reach India, launched by Freedom from Hunger in 2007, delivers the *Learning Games* through a network of "franchises," independent, for-profit Service Centers that train a vast existing network of over 3 million "self-help promoting institutions" (SHPIs) with over 50 million members. Funds come from INGOs, international donors (e.g., Nike) and other Indian organizations or local governments. The *Learning Games* teach about both finance (handling savings and money, bargaining, etc.) and health/nutrition. Participants can be (1) mother/mother-in-law and adolescent girl Self Help Groups (SHGs), (2) adolescent girls' SHGs, or (3) girls reached through non-SHG means.

Outcome/effectiveness of intervention. By November 2009, 36,000 girls had participated in the *Learning Games* via 166 SHPIs. Participation resulted mainly in improved confidence levels of the daughters (and mothers) regarding their money management. High percentages of girls reported behavior taught by the *Games*, e.g., 90 percent said they had a savings plan and 84 percent had savings; 94 percent reported eating iron-rich vegetables at least 3 times in the last week and 100 percent of unmarried girls said they didn't plan to marry before 18. The quantitative studies, however, found no statistically significant improvements in savings levels or effective bargaining from the Finance Games. The authors attribute this to external factors (e.g., deteriorating economic conditions). The Health Games had one significant result: greater HIV/AIDS knowledge. Products promoted in the Health Games (e.g., soap, foods rich in iron and protein) were not used more, "likely due to their perceived costs" (p. ii). The qualitative studies revealed overall satisfaction with the Games. Mothers/daughters enjoyed learning and communicating about important topics. Girls-only groups liked having their own space to discuss reproductive and sexual topics.

Method via which intervention was evaluated. An outcomes assessment was conducted in the five states of east and northeast India; it examined 51 SHPIs trained from February-December 2008. There also was a qualitative component and one randomized controlled trial evaluation

⁴⁷ In this section, too, the last lesson (presented in brackets) gives a final comment by the authors of this report.

⁴⁸ Gray, Bobbi and Sheila Chanani. July 2010. *Advancing Women's and Adolescent Girls' Access to Resources and Influence in Rural India*. Davis, CA: Freedom from Hunger Research Report No. 11 [assesses Freedom from Hunger's unique *Learning Games*].

(consisting of baseline, midline and end line rounds) conducted with an SHPI located in Nadia, West Bengal.

Lessons. (a) The *Learning Games* were popular with participants but they were (most) effective when SHPIs were able to fully implement them, with high levels of delivery quality. (b) Organizations already serving girls or adolescents achieved more implementation of the *Games* and should be the starting point in scaling up efforts. (c) More time/sessions are likely needed for improved impact of both the Financial and Health games. (d) Also, communication with parents and community prior to implementing the Games is crucial to ensure support for girls' participation and to minimize misinformation about the *Games*. [(e) The *Learning Games* model is potentially very useful in reaching out to the mothers-in-laws of adolescent girls. Although no statistics were given, it was clear that mothers vastly outnumbered mothers-in-law (only a small proportion of girls were married). But the *Learning Games* approach could be adapted to emphasize nutrition and safe motherhood messages (perhaps reducing the general health messages) and then actively promoted to mothers-in-law of adolescent girls. The games were described as entertaining, so both generations could have fun together while learning accurate information about general nutrition as well as topics relating to (future or imminent) motherhood: family planning (including for birth spacing); medical care, micronutrient supplements, diet and optimal weight gain during pregnancy, exclusive breastfeeding, supplementary feeding, etc. The only drawback is the lack of any component that would provide access to income for the girls and, perhaps, their mothers-in-law but this might fatally overburden the already complex *Learning Games* model.]

28. Economic Strengthening Interventions for Adolescent Girls – Zimbabwe⁴⁹

Implementing Agencies: Two of CRS' five partners: ORAP (Organization of Rural Associations for Progress), and ASAP (A Self-Help Assistance Project); Funding Agency: CRS. Time Period. Qualitative data were collected August 16-21, 2010.

Objective: Examine ORAP's vocational and Junior Farmer Field and Life Schools (JFFLS) and ASAP's Savings and Internal Lending Communities (SILCs) to assess their effectiveness in helping adolescent girls overcome barriers to their economic empowerment. The goal of CRS's overarching Out-of-School Adolescent (OSA) Support Project was to improve the economic status, food security, health and psychosocial well-being of out-of-school adolescents.

Programmatic Approach: CRS supports both of ORAP's programs for adolescents: (1) vocational training, and (2) JFFLS. It also supports ASAP's SILCs for adolescents (SILCs use CARE's Village Savings & Loan (VSL) model). These initiatives serve CRS's mission of helping orphans and children made vulnerable by HIV (OVC) as well as CRS attempts to provide additional programming for adolescent OVC girls. The beneficiaries of CRS's

⁴⁹ Miller, Carrie, Melita Sawyer and Wendy-Ann Rowe. 2011. *My Skills, My Money, My Brighter Future in Zimbabwe: An Assessment of Economic Strengthening Interventions for Adolescent Girls*. Baltimore, MD: Catholic Relief Services (CRS).

overarching OSA Support Project are ages 10-19; at least 60 percent are girls and 10 percent are from child-headed households. At the time of the assessment, OSA had reached 9,600 youth out of a CRS target of 10,500. Overall, the OSA Support Project is aimed at **improving livelihoods, food security and economic opportunities** through vocational training, JFFLS and SILCs, complemented by life skills, reproductive health/sexual education, and psychosocial support services.

Outcome/effectiveness of intervention. All three components provided benefits to adolescent girls, with a few drawbacks. (1) The vocational training, for youth 16-19, provided mostly gender-stereotyped training, so that girls learned sewing. They gained skills to make a livelihood and increased their self-image and self-esteem. Still, employment and educational gender biases made it difficult for girls to earn a decent living or advance professionally. (2) The JFFLS also provided girls with valuable sources of income through gardening: “girls were able to earn between US\$5 and US\$20 per month through the sale of surplus produce from their gardens” (p. 28). But JFFLS offered very limited training on entrepreneurial and agriculture-related business development skills. (3) The SILCs are self-selected small groups that meet regularly to save and borrow at an interest rate and loan term predetermined by the group (p. 34). At the time of the assessment, the SILCs for adolescents were composed of 6-15 members, ages 12-18. They provided psychosocial support activities, and health and life skills education as well as savings and credit. Two principal achievements of the SILCs are that they proved particularly effective in allowing girls to start small individual income-generation activities and that these allowed girls to invest in their own education and stay in school; the girls also learned how to better manage their finances (p. 37). Additionally, SILCs provided leadership opportunities for girls in both all-girl and mixed groups and generally increased girls’ self-esteem.

Method via which intervention was evaluated. The fieldwork was very short, six days, and entirely qualitative. Overall, 11 group discussions were held, seven with adolescent girls, two with adolescent boys, and two with a mixed male/female caregiver group (N=88, 67=female, 21=male). In addition, focus groups, key informant interviews and staff interviews brought the total of interviewees to 114. The interviews were supplemented by a literature review. None of the results are presented in quantitative terms but some are stated rather strongly for the methods used (e.g., about increased income and improved quantity and quality of diets).

Lessons. Reading the findings a bit “between the lines,” the following seem to be relevant lessons vis-à-vis adolescent girls: (a) All in all, the SILCs seem to do best because they often permitted girls to earn enough through income-generating activities launched with SILC credit to remain in school – those in the other programs usually dropped out of (regular) schooling by age 13 or 14. (b) Combining the JFFLS with SILC access to credit would improve prospects for those receiving the agricultural training. (c) In the vocational training, availability of instructors drove skills offerings, and for girls, this further pushed them into sewing – an advance over their present situation but not as remunerative as the activities offered to boys. (Fortunately, this is not a difficult shortcoming to fix.) [(d) Although this was an intervention in Zimbabwe, it involved a potentially effective combination of 1. providing credit through a recognized program – CARE’s Village Savings & Loan (VSL), which (surprisingly) catered to adolescents, and 2. providing training in skills that can lead to income, i.e., income-generating activities (IGA), which for girls, involved sewing (in the vocational track) and gardening (in the farming track). It may be useful

to check whether CARE runs VSLs in South Asia that are open to adolescents. Another topic for investigation is whether there are other South Asian programs that provide training in IGA to adolescent girls. It should be noted, however, that the BRAC ELA Centers discussed below ably provide the same mix of credit and IGA, with some additional components (e.g., sociability and health information), too. The BRAC ELA model seems to be more effective but it is possible that this CRS approach may be better adapted to the specific milieu of Zimbabwe.]

29. Prenatal Care for Adolescents – Multiple Countries⁵⁰

Implementing Agency: ICRW; Funding Agency: USAID; Time Period: 1987-1990 for the 20 research projects included in the study; report prepared in 1990.

Objective. Identify patterns of use of prenatal care by adolescents so appropriate strategies can be developed to better meet their prenatal care needs.

Programmatic Approach. Both Lundgren et al. and Mendez-Dominguez interviewed pregnant adolescents as well as other key informants. Parker et al. summarize the results and discuss conclusions and recommendations.

Outcome/effectiveness of intervention. Both studies revealed that prenatal care for adolescents is low, late and inadequate. Reasons for their underuse of prenatal care include guilt and embarrassment and very low perceived need. Adolescents most at risk are those without family support, less educated, rural, and with an unwanted or unplanned pregnancy. Family was their main source of advice and they were attracted to midwives for moral support and comfort.

Method via which intervention was evaluated. Lundgren and her colleagues interviewed 300 pregnant adolescents and Mendez-Dominguez interviewed 282. Parker et al. examined their data on frequency/timing and source of prenatal care, as well as factors affecting use of prenatal care (e.g., quality of care, cost – both monetary and time/distance – income, education, urban/rural, support system/with whom they lived, and psychological factors such as guilt/embarrassment and low self-esteem).

Lessons. (a) Adolescents' attitudes and beliefs about pregnancy and prenatal care emerged as key factors in their underuse. (b) Families were important and in Guatemala, it was the mother-in-law who was critical (78 percent of adolescents lived with their in-laws but most had a bad relationship with the mother-in-law and poor communication about pregnancy). (c) Midwives offered the moral support they wanted and that the formal sector lacked (a lesson for formal

⁵⁰ Parker, Laurie Noto, Geeta Rao Gupta, Kathleen M. Kurz and Kathleen M. Merchant. 1990. *Better Health for Women: Research Results from the Maternal Nutrition and Health Care Program*. Washington, DC: International Center for Research on Women (ICRW). [Note: This report describes 20 research projects in 13 countries carried out under USAID's Maternal Nutrition and Health Care (MNHC) Program initiative with ICRW. Two involved use of prenatal care by pregnant adolescents: Rebecka Lundgren et al. studied the Metropolitan Mexico City area and Alfredo Méndez-Domínguez studied indigenous girls in eight semirural communities in Guatemala. (Chapter 4 of Parker et al. summarizes the two studies; individual paper summaries are No. 6 for Méndez-Domínguez and No. 12 for Lundgren et al.)]

sector health care). [(d) The kinship system among the Guatemalan Mayan also involves a preference for patrilocal residence, so the findings about having to depend on a mother-in-law with whom you live but have a bad relationship also resonate for married, pregnant South Asian adolescent girls. Are there traditional birth attendants that the girl and her mother-in-law could visit together and would such a person be a good source for accurate advice and good prenatal care as well as a warm support system? If so, interventions might be designed to unite mother-in-law and their pregnant young daughters-in-law in a less off-putting form of prenatal care than that offered by the formal system.]

30. Girls Count - Multiple countries⁵¹

Implementing Agency: The Chicago Council on Global Affairs; Funding Agency: The Nike Foundation, The Bill and Melinda Gates Foundation and the UN Foundation; Time Period: Based on recent literature (on rural adolescent girls, including references on interventions, research and policy).

Objective. As the latest effort in the Girls Count reports, this report/monograph makes recommendations about initiatives that will enable girls to transform rural economies; it also provides the background and arguments for taking immediate action to implement the recommendations.

Programmatic Approach. The Girls in Rural Economies project began in 2009, to focus on the triple disadvantage of location, age and gender these adolescents face. Experts from a variety of fields, including agriculture and health, identified ways to better support adolescent girls that would, in turn, help them transform poor rural economies.

Outcome/effectiveness of intervention. The volume is comprehensive and filled with current and excellent information and innovative recommendations for reaching and helping rural adolescent girls that also will have positive consequences for their societies [but there is little here for nutrition, per se].

Method via which intervention was evaluated. Review of relevant literature, including interventions, input from 16 experts, and analysis of information on interventions, programs and policies that speak to improving the lives and power of rural adolescent girls.

Lessons. The findings and recommendations are rich, and often creative and important vis-à-vis rural adolescent girls. Here, only those with relevance for the present paper are included. (a) To reduce early marriage among girls in Ethiopia, girls' groups were formed; if they completed the program, they received a goat that could generate significant income (p. 53). (b) Adolescent female anemia must be included in global health initiatives (p. 105). (c) A standardized 12-year-old girls' health check added to health and nutrition initiatives could critically affect their health

⁵¹ Bertini, Catherine, Chair. 2011. The Chicago Council on Global Affairs (no other authors credited). *Girls Grow: A Vital Force in Rural Economies – A Girls Count Report on Adolescent Girls*. Chicago: The Chicago Council on Global Affairs.

and generate germane information for future initiatives (p. 110). [(d.) The most important of the three lessons relevant for this report is clearly (a), concerning the goat. It might be useful for gender-inclusive nutrition programs that aim to empower South Asian adolescent girls. The notion of providing a goat for completion of a nutrition and IGA program might translate to interventions for adolescent girls in South Asia. As an animal husbandry initiative, goats are hardier than poultry – even HKI’s Homestead Food Production efforts had a hard time adding illness-prone chickens to the mix without offering veterinary services. Moreover, female goats might offer a source of dairy products (milk, cheese) if local demand existed and if girls could be trained in cheese-making.]

31. Employment and Livelihood for Adolescents Centers - Bangladesh⁵²

Implementing Agency: BRAC; Funding Agency: BRAC; other support sources not specified; Time Period: BRAC started the Employment and Livelihood for Adolescents (ELA) Centers for girls in 2005.

Objective: Assess the usefulness of the program in terms of delaying age of marriage, keeping girls enrolled in schools, increasing their mobility, and enhancing sociability among themselves, awareness about health issues, and economic empowerment (p. 4).

Programmatic Approach. BRAC provides participants of ELA Centers (girls and young women 11-25) with access to credit, skill training in income-generating activities, books, games and space for socializing to help build up both their livelihoods and their lives. Many of the girls already had been members of microcredit groups but the ELA Centers added the training in income-generating, as well as recreational reading and games and space for socializing. Each Center averaged 30 participants. Girls met twice weekly: once to pay loan and savings installments and again for the other activities. The Program Supervisor met with parents and community periodically to create a positive attitude about letting the girls participate.

Outcome/effectiveness of intervention. Despite self-selection into the program, which clouded the quantitative assessment, indications were found that the program (1) engaged participants in rewarding or potentially rewarding economic activities; (2) expanded the girls’ mobility, (3) reduced early marriage, and (4) increased their involvement in extracurricular reading (p. iv). Specifically, the evaluators found that “the most salient change of perception was the growing dependency that parents now had on their daughters due to IGA training and loan intakes” (p. 33). Interestingly, among the relatively few girls who were only in a microcredit group (VO program), many gave their loans directly to their parents for use in father’s or brothers’ businesses. But most girls participated in the ELA Centers program, which gave IGA training as well as microcredit. Those girls, the evaluators found, used their loan to commercialize their own specific skills that they had learned through the ELA IGA training. (ELA programs include poultry farming, sewing and vegetable cultivation.) It’s worth underlining that the evaluators

⁵² Shahnaz, Rizwana and Raihana Karim. 2008. “Providing Microfinance and Social Space to Empower Adolescent Girls: An Evaluation of BRAC’s ELA Centres.” Dhaka: BRAC Research & Evaluation Division.

considered the girls “to have significant control over the[ir] loan” (p. 25). They do note that although “the male member of their family does marketing of their produce” (ibid.), parents of these girls were more willing to let them attend the center and carry out their IGA. In short, these parentally approved activities increased their mobility. Parents also were more receptive to delayed marriage. [Note: The evaluators don’t consider the interrelationship between the girls’ increased economic capacity – and value to their families – and the parents’ increased willingness to let their girls be more mobile and to delay marriage. This is because they seem unaware of research linking greater female economic power with these outcomes.]

Method via which intervention was evaluated. Two survey rounds were conducted on the same respondents in 2005 and 2007; the final analysis groups were girls participating in the ELA Adolescent Centers and non-participants. The self-selection affected the quantitative variables and there was an apparent underestimation of impact; there also was a large disparity between the quantitative and the more positive qualitative findings.

Lessons. Concerning girls’ economic empowerment and autonomy, the following are relevant: (a) Despite the positive association between receiving IGA training and borrowing that indicates girls are using the fund themselves, “a number of them” gave the money to their parents for investment; this provided incentives for parents to let their daughters participate – “to utilize the financial service that they gain through her” (p. 19). (b) Still, the evaluators conclude that “most of the center adolescents, who received skill training as well as loans, [were] presumed to have significant control over the loan...and [planned on] using the loans in the future...to support their own family after marriage. (c) “Skill training [in IGA] seemed to play crucial roles in creating entrepreneurship among these adolescents” (p. 26). (d) Initially reluctant parents allowed their daughters to spend afternoons at the Center after staff told them that daughters would be given training in IGA in addition to the more “social” activities. [(e) The ELA intervention seemed the best for adolescent girls encountered in this research. This is because it combines credit with IGA and other extremely useful social and health knowledge and skills. The nutrition component easily could be strengthened in a future intervention but everything else seems to mesh very well: girls are economically empowered to the point where they become assets, not liabilities to their parents. This gives the parents incentives to permit their daughters to continue in the program, continue to learn, continue to delay marriage, and increase their mobility to boot. To what extent could such a program be replicated by NGOs other than BRAC, which has renowned expertise in credit, IGA, health and social programming? Extending this program beyond Bangladesh should be actively explored.]

APPENDIX 5: TABLE OF INTERVENTIONS

Table 1: Type of Intervention x Region and Country for 31 Cases

	S. Asia	E./SE. Asia	Other Asia	Africa	Latin America & the Caribbean	Multiple
Women's HH Autonomy						
1. MkKelly & Watson				Ghana	Bolivia	
2. Alam	Bangladesh					
3. Meizen-Dick et al.						mult. countries
4. Shroff et al.	India					
5. Gaiha & Kulkarni	India					
6. Ahmed et al.	Bangladesh					
7. Birner et al.	Bangladesh					
8. De Groote, et al.				Mali		
9. Helen Keller Intl.	Bangladesh, Nepal	Cambodia, Philippines				
Increase HH Support						
10. Adato et al.			Turkey		El Salvador, Mexico, Nicaragua	

	S. Asia	E./SE. Asia	Other Asia	Africa	Latin America & the Caribbean	Multiple
11.Paes-Sousa et al.					Brazil	
12.Davis et al.					Mexico	
13.Parlato & Seidel				Burkina Faso, Mali, Niger		
14.Aubel et al.				Senegal		
15.Wollinka et al.	Bangladesh	Vietnam			Haiti	
Increase Commu- nity Support						
16.The Hunger Project	Bangladesh, India					
17.Inayati et al.		Indonesia				
18.Arifeen et al.	Bangladesh					
19.Bryce et al.						12 countries
20.Abrahams & Labbok						mult. countries
21.Semega- Jannah				The Gambia		

	S. Asia	E./SE. Asia	Other Asia	Africa	Latin America & the Caribbean	Multiple
22. World Health Organization						10 countries
22a. Case studies		Cambodia		Benin	Bolivia	
23. Davies-Adetugbo & Adebawa				Nigeria		
24. Gartner et al.				Senegal		
25. Sifri et al.				Burkina Faso		
26. World Bank				Benin		
Targeting Adolescents						
27. Gray & Chanani	India					
28. Miller et al.				Zimbabwe		
29. Parker et al.						13 countries (20 research projects)
29a. Case studies: Lundgren et al. Mendez-Dominguez					Mexico Guatemala	
30. Bertini						mult. Countries
31. Shahnaz & Karim	Bangladesh					

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