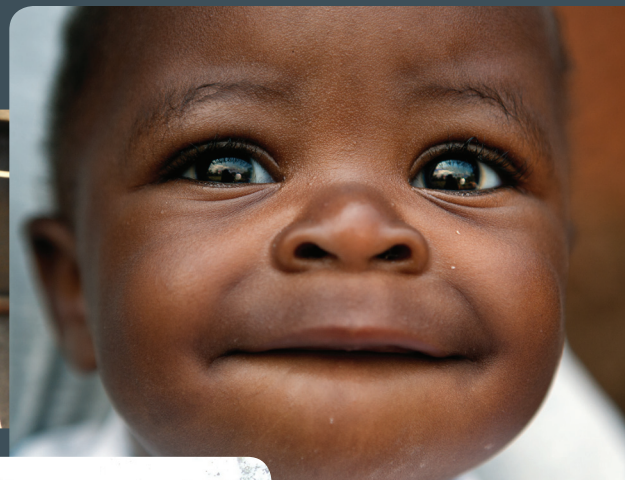


The roles and influence of grandmothers and men

EVIDENCE SUPPORTING A FAMILY-FOCUSED APPROACH
TO OPTIMAL INFANT AND YOUNG CHILD NUTRITION



Photos clockwise from top right: PATH/Evelyn Hockstein, Judi Aubel, PATH/Evelyn Hockstein, Judi Aubel, and Miguel Alvarez

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Acronyms

AIDS	Acquired Immune Deficiency Syndrome
BASICS	Basic Support for Institutionalizing Child Survival
DEC	Development Experience Clearinghouse (USAID)
DFID	United Kingdom Department for International Development
HHPH	household production of health
HIV	Human Immunodeficiency Virus
HKI	Helen Keller International
IYCN	Infant & Young Child Nutrition Project (USAID's flagship project)
PATH	Program for Appropriate Technology in Health
PMTCT	prevention of mother-to-child transmission of HIV
R4D	Research for Development (DFID)
UNAIDS	Joint United Nations Programme on HIV/AIDS
USAID	United States Agency for International Development
WHO	World Health Organization

Executive summary

Most policies, research, and programs on infant and young child nutrition and health in Africa, Asia, and Latin America focus on mothers of young children. The results of community interventions with this focus have been disappointing. There is growing recognition that in order to bring about sustained enhancements in household-level nutrition practices, there is a need to adopt a wider approach that involves other influential household actors, including senior women, or *grandmothers*, and *men*. The purpose of this report is to make available to the public health community the evidence on the influence of grandmothers and men on child nutrition and to offer recommendations for community nutrition intervention planners to strengthen strategies and increase program results.

This review of both published and gray literature has two objectives: (1) to examine the research on the roles and influence of grandmothers and men in family-level nutrition practices across cultures; and (2) to examine community nutrition interventions in which grandmothers and/or men have been involved in order to understand programmatic approaches used and results obtained. The review includes analysis of studies on infant and young child feeding in HIV/AIDS-prevalent areas and specifically looks at the inclusion of grandmothers and men in prevention of mother-to-child transmission of HIV (PMTCT) interventions.

In the first part of the review, studies were examined from 85 different cultural contexts in 48 countries, with a focus on the roles of grandmothers and men in improved infant and young child feeding practices. Grandmothers play a leading role in decision-making related to their various domains of expertise; namely, maternal nutrition, pregnancy and delivery, newborn care and breastfeeding, complementary feeding, home care for sick children, and referral of sick children to traditional and formal health-sector specialists. They also serve as the primary caregivers of women and children.

On the other hand, the existing literature regarding men's involvement in promoting enhanced infant and young child nutrition practices is limited. In general, it reveals that men/fathers are rarely involved in either caregiving or advising on these issues. In most cases, the role of husbands/fathers is an indirect and supportive one, consisting primarily of providing food for the family and resources to finance logistical and other costs associated with both routine and emergency health care for children and women.

The review of infant and young child feeding interventions to identify those that involve grandmothers and/or men shows that most infant and young child feeding programs focus on women of reproductive age and their young children, a few explicitly involve men, and even fewer involve grandmothers. This review provides evidence that program planners need to rethink the design of community nutrition interventions in order to make them more culturally relevant and potentially more effective.

Programs to promote optimal infant and young child feeding in HIV/AIDS-prevalent areas should build on existing household roles, expertise, and communication patterns. PMTCT programs that aim to support HIV-infected women should be rooted in extended and collectivist

family systems, prevalent in non-Western societies, and should involve the human resources therein who are designated to support women and young children (primarily experienced elder women and also other women).

The predominant orientation of most PMTCT programs promotes individual behavior change on the part of HIV-positive mothers. Men have been involved in a few programs, although the results of these strategies have been mixed, and in some cases, have produced negative reactions from men and unintended consequences for women. The rationale for men's involvement in PMTCT programs appears to be based on two assumptions: first, that men are the lead decision-makers at the household level in matters related to women's and children's well-being; and second, that social support for HIV-positive women can best be provided by men. Research evidence from a number of contexts clearly suggests the need to reexamine both of these assumptions.

While grandmothers play a central caregiving role in virtually all families, it is surprising that no PMTCT programs that explicitly involve grandmothers were identified. The failure of these programs to systematically include these culturally designated and community-acknowledged authorities has undoubtedly contributed to limited receptivity of communities to such interventions.

In HIV/AIDS-prevalent areas, there is need for intervention strategies to adopt a more social-ecological and family-focused approach rather than one that focuses on one or more segments of the family system (e.g., the mother-child dyad or the reproductive couple). Both grandmothers and men play critical and complementary roles in promoting the nutritional and health status of children and women. It is of critical importance that program planners understand the gender-specificity of these two key household actors with women and young children, in order to design programs that build on and strengthen those roles and relationships rather than ignore them and focus on women alone.

Recommendations

Based on the findings of this review, it is recommended that programs to promote improved nutritional practices related to infants and young children should:

- **Pay attention to the socioculture context.** Policies and programs to promote improved infant and young child nutrition, including for HIV/AIDS-prevalent areas, need to give greater attention to the sociocultural context within which women with infants and young children are embedded.
- **Conduct formative research as a basis for developing culturally grounded interventions.** In each cultural setting, a rapid formative assessment should be carried out in order to determine: (1) the knowledge, attitudes, and practices of key household actors related to infant and young child nutrition; and (2) the roles, communication networks, and decision-making patterns within household and community settings related to child nutrition.
- **Adopt a family-focused approach** in which the unit of analysis for both formative research and program design is the family rather than the mother-child dyad in isolation.

- **Build on the roles of women, grandmothers, and men.** Programs should build on and strengthen the capacity of different household actors to assume their culturally designated roles. Objectives and indicators to reflect this family-centered approach should be expanded.
- **View grandmothers and men as resources, not obstacles.** The benefits of promoting grandmothers and men in infant and young child feeding practices should be emphasized within programs.
- **Focus health training on family and cultural systems.** The curriculum of basic health training should be revised to give greater attention to family and cultural systems and to methods for understanding and incorporating elements of both into health service programs.
- **Train health workers to use non-directive communication.** To engage grandmothers and men and to encourage them to change requires that health-sector staff be skilled in non-directive communication and education approaches based on adult learning theory/principles.

Introduction

This report reviews both published and gray literature from the past 25 years that addresses intra-household roles and dynamics related to infant and young child nutrition—specifically the roles and influence of senior women, or *grandmothers*, and *men*. The report examines infant and young child nutrition and other maternal and child health interventions explicitly involving grandmothers and/or men and reports on each intervention’s effectiveness. Finally, the report looks at the roles of grandmothers and men in infant and young child feeding, and in areas with high prevalence of HIV/AIDS, each group’s inclusion in prevention of mother-to-child transmission of HIV (PMTCT) programs. The analysis provides the basis for a series of conclusions and recommendations for designing future infant and young child nutrition interventions.

The focus of this review is on societies in Africa, Asia, and Latin America in which culturally prescribed roles, values, traditions, and communication patterns are often significant factors at the household and community levels. In many public health programs in these regions, the cultural realities do not receive sufficient attention, although it is often stated that programs should be “culturally adapted” or “culturally appropriate.” Some programs even perceive culture as a constraint or obstacle.

In order to draw attention to the need for increased cultural sensitivity in nutrition programming, this report works under several assumptions. The first is that nutrition and health programs will be more appropriate and effective if they are based on the cultural realities—the culturally defined roles, responsibilities, norms, and practices—of the communities they support. The second is that culture is composed of two interrelated dimensions: the *social structures and organization* in which individuals are embedded related to family, kinship, roles, relationships, hierarchies, and communication nets; and the *normative systems of values and beliefs* that affect individual behaviors.^{*1} In many community nutrition and health interventions, significant attention is given to the latter but little to the former. This limited notion of culture may explain why formative research often does not provide adequate insight into household and community social structures, roles, relationships, and communication patterns. A growing body of literature, which is reviewed within this document, examines and critiques these existing frameworks.²⁻⁵

A third assumption is that in order to comprehensively understand the roles and influence of grandmothers and men, it is necessary to first understand the broader sociocultural context in which both of these groups are embedded. Concepts of family, husband-wife relationships, and women’s roles that are based on Western cultures often serve as the foundation for community health programs, clashing with the sociocultural values of other contexts. Cultural systems, family systems, and the role of elders within these systems are three key features that should be carefully considered in future formative investigations and program designs.

* Referring to Albert Pepitone’s conceptualization of culture.

About the Infant & Young Child Nutrition Project

The Infant & Young Child Nutrition (IYCN) Project is the United States Agency for International Development's (USAID) flagship project on infant and young child nutrition. Begun in 2006, the five-year project aims to improve nutrition for mothers, infants, and young children, and prevent the transmission of HIV to infants and children. The IYCN Project builds on 25 years of USAID leadership in maternal, infant, and young child nutrition. Our focus is on proven interventions that are effective during the first 1,000 days of life (pregnancy through the first two years).

Methodology for the literature review

This report examines two main sets of literature: first, literature dealing with the roles and influence of grandmothers and men in infant and young child nutrition, and child and maternal health issues more broadly; and second, literature reporting on interventions aimed at improving norms and practices related to infant and young child nutrition that explicitly involve grandmothers and/or men.

The majority of the research reviewed in this report was gathered over the past 15 years from peer-reviewed published documents and gray literature[†] by nongovernmental organizations, international development organizations, and universities. Between published and gray sources, the author identified studies from various cultural contexts among 48 different countries in Africa, Asia, and Latin America, and from a broad range of fields, including anthropology, nursing, and public health.

A series of searches was conducted in PubMed, the USAID Development Experience Clearinghouse (DEC), and the United Kingdom's Department for International Development (DFID) research database (Research for Development, or R4D). PubMed, produced by the National Library of Medicine, was primarily searched for peer-reviewed scientific papers and literature reviews. The USAID DEC database provided information on programs funded by the United States government. The United Kingdom's DFID R4D database provided information on global development projects and offered a different perspective from the United States government. Additionally, Google Scholar was searched to find gray literature and other unpublished program and research articles. Scientific studies and program evaluations were selected for further review, and the full text of articles was obtained to determine if they contained other relevant citations. Related citations of key articles helped to identify other relevant literature. Staff from the PATH-led IYCN Project started with Internet searches and then employed a senior library associate from PATH's knowledge services team to expand the search of documents related to: (1) grandmothers and men engaged in infant, child, or maternal health and nutrition programs (family planning, HIV/AIDS, reproductive health, maternal and child nutrition); and (2) research and programs focusing on Africa, Asia, and Latin America. Of the 89 documents identified through these searches, 73 were included in this literature review.

[†] 'Gray literature' is a general term used variably by the intellectual community, librarians, and medical and research professionals to refer to a body of materials that cannot be found easily through conventional channels such as publishers. Examples of gray literature include technical reports from government agencies or scientific research groups, working papers from research groups or committees, white papers, or preprints.

Context for the literature review

The sociocultural context for infant and young child nutrition

Cultural systems

In Albert Pepitone's bi-dimensional framework for cultural systems, he points out that the fundamental underlying feature of any cultural system is the way the various members of the culture are structured, and the way they interact to accomplish everyday activities and longer-term objectives. Anthropologists and cultural psychologists identify two contrasting types of cultural systems: *individualist* and *collectivist*.⁶ Fundamental differences exist between the *individualist* orientation of Western, industrialized societies and the more *collectivist* nature of non-Western, developing societies.

In the various guidelines for health promotion, health education, and health communication programs, attention given to the collectivist nature of these societies is limited. Rather, most programs are based on an individualist value system and the overarching strategy in such

programs is to promote individual behavior change. We propose that this focus will have limited success, as it is at odds with the way many societies operate. Nigerian academic Collins O.

Airhihenibuwa calls attention to this, asserting that many public health prevention and education strategies fail to take into account key elements of the local cultural identity, logic, and patterns of social organization, of which collectivist values are a central feature.⁷

Nutrition and health-related attitudes and practices of family and community members are interconnected components of larger value systems. For this reason, it is extremely difficult to change just one element of that system. Convincing a woman to go against the collectively accepted cultural norm of giving water to a newborn, for example, often is met with serious resistance from the wider cultural system. Susan Reynolds Whyte and Priscilla Wanjiru Kariuki point out the limitations of reductionist nutrition interventions that "treat women as individual actors" and ignore the fact that "women see themselves as enmeshed in social relationships" that profoundly affect their nutrition and caregiving practices.

The influence of collectivist societies on public health programs and nutrition and health practices

Key features of collectivist societies have direct implications for public health programs:

- Group identity is more important than individual identity.
- Interdependence is valued more than independence.
- Collective decision-making predominates.
- Multi-generational and extended families influence attitudes of individual family members.
- Respect for elders and for cultural traditions are primordial values.
- Elders play a key role in passing on learning to younger people.
- Intergenerational relationships and communication are strong.

A few practical examples of collectivist cultural values that directly influence the nutrition and health practices of women and children in non-Western societies include:

- The multi-generational and collectivist nature of childrearing.
- Decisions regarding the health and well-being of children are not made by women alone or only by the children's biological parents, but are made by extended family members involved in a process of intergenerational and collective decision-making.
- Younger women, in particular, rarely make totally independent decisions regarding nutrition/health-related practices.
- In crisis situations related to children's or women's health (e.g., childhood illness or complications of pregnancy), decision-making about what to do involves various key family members in a collective process.

For the past 15 years or so, public health researchers have called for moving from a reductionist focus on the mother-child dyad to a more systemic orientation that includes consideration of existing, culturally grounded strategies within families and communities.^{2,8-12}

Family systems

Despite their primacy, international policy guidelines, research projects, and interventions addressing community nutrition issues tend to give superficial attention to intra-familial structure, dynamics, and decision-making.^{10,13} Findings from *family systems theory*, for instance, which provide conceptual tools for investigating intra-household dynamics, are rarely discussed in community health literature.^{14-17‡}

From a family systems perspective, the mother-child dyad is nested within the family and is influenced by the interaction and collective decision-making of other household actors. The reductionist focus on the knowledge, attitudes, and practices of women of reproductive age, therefore, can camouflage the roles of other significant household actors, including grandmothers and men. *Hierarchy* and *interconnectedness* between different family members are key features of all family systems, especially in extended and intergenerational families. Within these contexts, family members' roles are determined, to a great extent, by gender, age, and experience.^{18,19} Age and experience confer both responsibility and authority. Nigerian sociologist Paulina Makinwa-Adebusoye argues that in patriarchal and hierarchical households, the most common household structures in Africa, “most women cannot exert much, if any, control over their own lives.”¹⁹ It appears that within this context, men and senior women make decisions that dictate what younger women can and cannot do.

Household production of health framework

In 1994, Peter Berman and his colleagues were among the first to call attention to the need for public health programs to be based on a more comprehensive understanding of intra-household roles, dynamics, and decision-making. These authors proposed the ‘household production of health’ (HHPH) framework, on the premise that the major determinants of health and health behavior change emanate from within households rather than from health services. The HHPH identifies key parameters of household structure and dynamics that should be understood as a precursor to the design of culturally adapted programs.

Inherent in the HHPH is the notion that all family or household systems have their own health-producing resources, knowledge, roles, traditions, and norms. Berman and his colleagues argue that household health-producing strategies are a combination of both internal and external elements, as reflected in their definition of the HHPH: “A dynamic behavioral process through which households combine their (internal) knowledge, resources, and behavioral norms and patterns with available (external) technologies, services, information and skills to restore, maintain, and promote the health of its members.”¹⁰

An important facet of the HHPH is the idea that any single component of the household system—for example, a woman of reproductive age, or a husband-wife dyad—cannot be fully

‡ While there is considerable discussion regarding the contrasting concepts of *family* and *household*, here these terms are used interchangeably.

understood in isolation. A comprehensive understanding of these components can only be reached if they are considered within the context of the larger system. The HHPH perspective, however, is not always considered in international public health research and programming, as the reductionist and behaviorist perspectives tends to prevail.

The HHPH orientation reflects an ecological perspective,^{3,20,21} which shares many features of a family systems orientation.¹⁴ Over the past ten years, there has been increasing discussion in the public health field about the need for a social-ecological or systems approach to understanding intra-household dynamics and developing interventions that promote change at that level.^{2,11,12}

Role of elders in cultural and family systems

Elders are critical to ensuring the cohesion and survival of families and communities in many non-Western societies, and are generally viewed as a resource. One specific and decisive facet in these regions is the central role played by elders in socializing younger generations, passing on indigenous knowledge and cultural values, and ensuring the stability and survival of their societies. Within these family and cultural systems, elders serve as models, advisors, and supervisors of younger generations.

Anthropologist Margaret Mead was one of the first to discuss the critical role played by grandparents.²² She wrote about how elders transmit the “model” of how family life should be organized to the next generation, including how children should be nurtured and taught. Communicologist Andreas Fuglesang describes elders as the *information processing unit* of a community,²³ arguing that elders should be involved in efforts to promote sustainable change within community systems. Sociologist Judith Treas argues that development programs that do not involve elders will be less accepted by them.²⁴

Nigerian academic Collins O. Airihenibuwa discusses the meaning of age in African societies, asserting that seniority is perhaps the most important facet of African cultural systems, broadly influencing relationships and behavior. He states that within communities, “communication channels are mapped along lines of seniority,” and argues that health prevention programs should build on these cultural patterns of communication and influence.⁷ Noshi Chadha discusses the role that elders continue to play in India in spite of vast economic and social changes. He writes that Indian elders continue to command high respect, as “they are (still) considered the storehouses of knowledge and wisdom within the family and community contexts.”²⁶

Gender-specificity applies to elders as it does to youth. In virtually all of these societies, grandmothers and grandfathers play distinct, but complementary roles in family and community systems. Senior women generally have primary responsibility for advising and dealing with health matters and the well-being of women and children. Elder men, or grandfathers, provide overall support to families and typically become involved in issues related to women and children when serious problems arise and when special resources are required.

The three interrelated concepts of cultural systems, family systems, and the role of elders in family and community systems provide the backdrop for the following discussion of specific research and reports.

Findings

The roles and influence of grandmothers and men related to infant and young child nutrition and health issues within different sociocultural contexts

A summary of the review findings from 85 different cultural settings in 48 countries is presented in Appendix A. From the studies reviewed, the following cross-cutting themes emerged, which are discussed in greater detail below.

Social roles and networks

- Gender-specific roles, age hierarchy, and decision-making related to maternal and child health and nutrition.
- The role of grandmothers as household advisors and caregivers related to pregnancy, childbirth, and caring for newborns and young children.
- The role of men/fathers as providers in the household and beyond.
- Summary of grandmothers' and men's roles in support of mothers and young children.
- Grandmother social networks as an indigenous system of collective support for young women and children.
- Strategies for engaging men for enhanced support of infant health and maternal care.

Programmatic involvement of grandmothers and men

- Approaches to infant and young child nutrition interventions involving grandmothers and men.
- Grandmother-inclusive nutrition and health programs.
- Men/father-inclusive nutrition and health programs.
- Involvement of grandmothers in promotion of optimal infant and young child feeding among HIV-infected mothers.
- Involvement of men in promotion of optimal infant and young child feeding among HIV-infected mothers.

Social roles and networks

Gender-specific roles, age hierarchy, and decision-making related to maternal and child health and nutrition

The literature reviewed reveals two characteristics of these societies in Africa, Asia, and Latin America that determine, to a great extent, the roles played by grandmothers and men and their influence on both women and young children; first, gender-specificity in household roles; and second, the hierarchy of authority within households based on gender and age. These two characteristics are observed across a myriad of cultural contexts and a consistent pattern emerges

with regard to the respective roles played by grandmothers and men related to women's and children's nutrition and health.

In more traditional societies, the roles of males and females are generally quite distinct. Cultural norms dictate that the roles of younger women and men are *gender specific*, as are the roles played by senior women (grandmothers) and senior men (grandfathers). Male family members are primarily responsible for providing the financial resources for basic household activities, including food. Women, in general, are responsible for managing the household and managing the daily tasks of raising children, including dealing with nutrition and health issues. The logical outcome is that over time, gender-specificity in roles of both males and females results in specialization in specific domains of activity. Studies support the conclusion that extensive experience and knowledge within a specific domain (e.g., child and maternal nutrition and health or financial income) confers authority to advise and teach others; in other words, gender-specificity leads to gender specialization, and in turn, gender-associated expertise and authority.

The role of grandmothers as household advisors and caregivers related to pregnancy, childbirth, and caring for newborns and young children

From the perspective of households and health-sector staff, the period of pregnancy, childbirth, and the first days of life are precarious for an infant. Especially for younger women, first-time motherhood is a challenging period, which requires various types of support. Research reviewed reveals that there are culturally defined strategies to promote the well-being of women and their offspring, especially during the critical periods of pregnancy, childbirth, the first weeks and months of life, and during childhood illness. Across cultures, a key feature of those strategies is the central role played by experienced senior women, who on the one hand, serve as advisors to younger women, and on the other hand, act as caregivers of women and children. These two facets of grandmothers' roles are complementary, and both contribute to the same pair of objectives: to transmit the *rules and procedures*, or norms, prescribed within the cultural and family systems from one generation to the next, and to ensure the survival of young offspring.[§]



Photo: Philippe Blanc

In the literature reviewed, responsibility for women during pregnancy, at delivery, for newborns, and for young children during the first years of life is consistently the domain of older, more experienced females.^{63,64} The numerous studies reviewed dealing with maternal and child nutrition and health issues clearly show that it is senior women who have greater knowledge and experience than either younger women or men of any age.^{8,30,33,34,38,40,43,45,49,51,55,65-72}

[§] There is evidence of the central advisory and caregiving roles played by grandmothers with women and young children in studies from: Albania,²⁷ Bolivia,²⁸ Brazil,²⁹ Burkina Faso,^{30,31} China,^{32,33} Costa Rica,³³ Djibouti,³⁴ Ghana,^{35,36} India,⁴² Indonesia,³⁷ Kenya,⁸ Laos,³⁸ Lesotho,³⁹ Malawi,^{40,41} Mali,⁴³⁻⁴⁷ Mauritania,⁴⁸ Nepal,⁴⁹ Nicaragua,⁵⁰ Niger,^{51,52} Nigeria,^{53,54} Pakistan,⁵⁵ Senegal,^{56,57} Somalia,⁵⁸ Sri Lanka,⁵⁹ Sudan,⁶⁰ and Uzbekistan.^{61,62}

Beyond the scope of this report, additional evidence of the important role of experienced, elder women related to pregnancy, childbirth, and the care of young children is reported in research from Europe and North America among immigrant groups from India in Canada,⁷³ and in the United States with Puerto Rican and Cuban communities.⁷⁴ The influential role of grandmothers far from their geographical roots provides further evidence of the tenacity of culturally dictated roles regarding nutrition and health linked to gender and social hierarchy.

Anthropologist Barbara Piperata affirms that “childbirth and the immediate postpartum period are events of great biological and social importance in our species.”²⁹ In light of high neonatal mortality rates in many countries over the past ten years, the international public health community has increasingly focused on the neonatal period of child development.⁷⁵

From a biomedical perspective, the delivery and postpartum period is critical to the well-being and survival of children and women. This period is decisive from a cultural perspective as well, but for somewhat different reasons. First, all societies realize that during the first weeks of life, there are a variety of threats to the health and survival of newborns. Second, during this period, all first-time mothers are expected to internalize socioculturally accepted practices related to pregnancy, childbirth, and child care, and require support from experienced mothers. Evidence from numerous contexts shows that societies have developed strategies in keeping with cultural standards to support women, young children, and families in response to these concerns. Within many sociocultural contexts, concern for the well-being of newborns is manifested through the isolation of newborns and mothers immediately after birth for a period of a few days to several months. This period of isolation allows for recuperation and coaching of the mother, as well as intensive monitoring and care of the newborn by senior women advisors.^{**}



Photo: Judi Aibel

In Malawi, women and newborns receive postpartum care during the *chilowero* period.⁴¹ In rural Tanzania, a woman on a traditional maternity leave of three months is under the direction of her mother-in-law.⁷⁶ In Nigerian Igbo culture, indigenous postpartum care, or *omugwo*, presents a unique opportunity for younger mothers to learn from senior women.⁵³ The *omugwo* rite has profound cultural significance, not only for new mothers and newborns, but also for the families of both parents, and especially for the mothers-in-law. Participation of grandmothers in *omugwo* “provides older women with a new and highly-valued role within the family and society. This contributes to their self-esteem, reputation, and general well-being.” In Uzbekistan, during the 40-day *chilla* period, the new mother and child are secluded, in most cases with the paternal grandmother.⁶² Throughout this period, it is the grandmother’s “obligation to provide information and assistance in the first stage of her grandchild’s life,” and the younger woman

^{**} Bolivia,²⁸ Botswana,⁷⁹ Burkina Faso,³⁰ India,^{77,78} Laos,³⁸ Malawi,^{40,41} Mali,⁴⁴ Nigeria,⁵³ Tanzania,⁷⁶ and Uzbekistan.⁶²

must learn from her senior advisor about how to care for her newborn following family and cultural traditions. In Maharashtra, India, newborns are isolated for seven to 12 days postpartum, during which only the mother, grandmother, and traditional birth attendant can touch the baby.⁷⁸ In many cultures, newborns are believed to be susceptible to the evil eye and isolation is meant to provide protection. During this period of seclusion, the paternal or maternal grandmother demonstrates how to bathe, massage, and feed the baby. In most cases, grandmothers advise younger mothers not to give colostrum, but instead to give sugar water for several days and to initiate breastfeeding after three days.

Various studies also document the intensified advisory and caring roles of grandmothers during periods of illness both with neonates and young children. There is extensive evidence of grandmothers' roles in the diagnosis and home treatment of infant and childhood illnesses.

For most of the studies reviewed, the methodological approach involved the analysis of household roles and influences based on an anthropological, or systems framework. Pioneering work in the area of *care* and *caregiving* related to child nutrition and health was done by Patrice Engle and colleagues in the 1990s.⁸⁰ They pointed out that little was known about *other caregivers*, beyond the mothers of young children. They emphasized the need for greater involvement of fathers in child nutrition-related programs; however, they made almost no mention of grandmothers.

From this review of the literature, it appears that grandmothers' impact on the nutritional and health practices of infants and young children is substantial and a result of both their direct caregiving and their advice to younger mothers and older siblings. Another important element of the grandmothers' teaching role is the modeling of behaviors related to, for example, food preparation or infant feeding. In many cases, this modeling consists merely of nonverbal communication. Many recent studies assess caregiving actions, but for the most part, neglect advice-giving, which is more difficult to measure due in part to the fact that the parameters of caregiving are not sufficiently defined. The advisory role of grandmothers may in fact have an even greater impact on child nutritional practices than their direct involvement in child feeding.

Anthropologist Penny Van Esterik identified another important dimension of caregiving that has generally been overlooked in conceptual and programmatic frameworks on child feeding and care: who is caring for the caregivers of young children. She pointed out that the acquisition of culturally appropriate caregiving attitudes and practices by younger mothers depends on the caregivers of women themselves—grandmothers and sometimes siblings.⁶⁴

The work of Alayne Adams and colleagues in Mali brings to light four key facets of social support that are beneficial to caregivers and positively affect child nutrition and health:

1. Practical support, including helping younger women with child care and housework.
2. Cognitive support, consisting of information and advice to promote health and well-being and to deal with illness.
3. Emotional or affective support, including love, caring, empathy, and encouragement.
4. Material support, such as money, food, and other tangible assistance.⁴³

Their research revealed that these various types of support are provided to younger women with children through social networks that are composed mainly of elder women primarily from within, but also from outside the family. Their research reveals both the complexity and importance of social support systems for women and their offspring. Other researchers in Asia⁸¹ and Africa⁵⁶ also discuss the importance of these primarily female social networks, referring to them as *cooperative female networks*.⁸² These studies help



Photo: Judi Aibel

to identify household and community actors who are a part of women's social networks and the types of support these actors provide. With this knowledge, culturally grounded interventions that build on these systems can be developed. According to the literature, the advising and caregiving of younger mothers is coordinated by experienced elder women, either kin or non-kin, and collective and cooperative child care is the norm.^{72,82-84} The importance of the social support provided to women by these networks is accentuated by the fact that most women across the developing world are quite young when they have their first baby. They necessarily need to learn mothering skills from a more knowledgeable person; they need guidance during the formative phase of motherhood. The average age at which women marry for the first time in South Asia is 17.1, 17.3 in Africa, and 18.8 in Latin America.⁸⁵

The literature reviewed here from numerous contexts shows that there is a clearly delineated hierarchy of experience and authority within family systems that responds to needs of first-time mothers and their newborns. In Mali, for example, the active advisory role of mothers-in-law with first-time mothers supports the conclusion that "young and first-time mothers rarely make decisions alone about aspects of their children's well-being."⁸⁶ In Senegal, "younger women's ability to make independent decisions about how to feed their infants is limited. In most cases, women's practices reflect what senior women in the family have instructed them to do."⁸⁷ In Burkina Faso, either maternal or paternal grandmothers teach first-time mothers about all aspects of child care, including breastfeeding.³¹ In Malawi, given their status as 'guardians of tradition', either maternal or paternal grandmothers actively teach new mothers about culturally appropriate newborn care practices.⁴¹ In Java, anthropologist Kristina Gryboski describes the intensive involvement of grandmothers as advisors and trainers of young daughters-in-law when they have their first child, reporting that "younger mothers are reluctant to ignore the advice of their elders, to break tradition, and thereby create conflict."⁸⁸ During subsequent pregnancies, the trainer's involvement decreases as their confidence in younger women's mastery of prescribed knowledge and skills increases. Zubia Mumtaz and Sarah Salway report similar trends in Pakistan regarding the authority and responsibility of older women in matters of maternal and child health. "Older women are considered *siyarni* (wise and experienced) and are vested with the authority to make decisions that are binding. All of her [the younger woman's] healthcare needs are her mother-in-law's responsibility...and her decision is usually final."⁵⁵ In Bangladesh, domineering

grandmothers dictate how infants will be fed.⁸⁹ These researchers report that the majority of powerful mothers-in-law are opposed to exclusive breastfeeding and insist on giving other types of milk.

Maternal and child nutrition and health research and programming at both national and international levels have given limited attention to the culturally determined family-level strategies that provide care and training to younger mothers, and have generally ignored the pivotal role of senior women in these strategies.

The role of men/fathers as providers in the household and beyond

Across these societies, male family members are found to be primarily responsible for providing (1) financial resources for basic household activities, including food; (2) financial and logistical resources for both routine and emergency health care; and (3) resources for various activities outside the household that are critical to family survival.

However, in domains in which men are not extensively involved (for example, child feeding), they do not accumulate significant knowledge, and therefore, are not viewed either by themselves or by other household members as authoritative advisors. Research results from many countries consistently show that men's knowledge of and involvement in maternal and child nutrition and health issues is limited compared to that of women.^{††}



Photo: Evelyn Hockstein

For example, in Niger, it was found that the role of the father after birth is generally limited to providing food for infants and new mothers, and paying for prescriptions.⁵¹ At a second site in Niger, a similar pattern of limited father involvement was observed with malnourished children.⁵² In urban Accra, McGadney-Douglass & Douglass found that most fathers were not at all involved in caring for malnourished children, and that such care was coordinated by the 'primary caregivers', senior female family members.⁷¹ In Nicaragua, studies of both rural and urban contexts showed that men's involvement in newborn care is very limited.⁵⁰ Similarly, in rural Mexico, researchers concluded that "men are never involved in infant care and feeding."⁹³ In Malawi, Waltensperger found that in both patrilineal and matrilineal societies, newborn feeding and child care practices adopted by women are strongly influenced by grandmothers' advice, while men have relatively limited influence on practices with infants during their first months of life.⁴⁰

In the public health literature, it is often assumed that men are the authoritative *heads of household* and *decision-makers* on all family matters, including health and nutrition.⁹⁴ This

^{††} Albania,²⁷ Burkina Faso,^{30,40,45} Congo,⁷² Djibouti,³⁴ Ghana,⁷¹ Madagascar,⁹⁰ Malawi,^{40,41} Mali,^{45,91,92} Mauritania,⁴⁸ Nicaragua,⁵⁰ Niger,^{51,52} Pakistan,⁵⁵ Senegal,⁵⁶ and Uzbekistan.⁶¹

assumption is reflected in various policy documents on men's involvement in health programs that assert that men play all-encompassing roles at the family level. Male family members are primarily responsible for providing financial and logistical resources for basic household activities, including food, health care, and other critical activities outside the household. The literature shows, however, that the responsibility of caring for women during pregnancy and delivery, and for newborns and young children in their first years of life is consistently the domain of older, more experienced females.^{‡‡} Each of these studies supports the conclusion that extensive experience and knowledge in a specific domain confers authority to advise and teach others.

The studies not only show how gender specialization is conferred to decision-making authority in these communities, but also how health decisions are made collectively among different family members. Public health programs, however, too often assume that health-related decisions are made by individuals, reflected in the frequently asked question in health surveys about “who decides” what to do in specific health-related situations.^{§§3,4,102}

Several African and Asian social scientists have questioned the assumption of men's all-embracing role at the household level,^{18,19,41,81} suggesting that such generalizations are insufficient to explain both the complexity of the decision-making process and the fact that within collectivist and multi-generational contexts, decision-making involves multiple actors.^{41,81,111} As with other aspects of life, health-related decisions are made communally following a dialogue and consensus among family members. Throughout this process, each family member has a different level of influence, based most notably on gender and seniority.

Following an investigation of intra-household dynamics related to reproductive health in collectivist South Asian cultures (Bangladesh, India, Pakistan), Zubia Mumtaz and Sarah Salway concluded that involvement in the decision-making process and influence on decisions are directly tied to the household actor's domains of expertise—a concept borne out by numerous examples

Whether or not I am there, my mother is the head of the household. Whatever happens, she gives advice and my wife follows it to the letter in order to ensure her own health and the baby's.

~Senegalese husband
on his postpartum role⁵⁶

from research in various countries. The researchers found that mothers-in-law, rather than husbands, play a leading role in reproductive health decisions. These same researchers affirmed that in the case of a daughter-in-law's pregnancy, neither the pregnant woman nor her husband directly makes decisions about managing the pregnancy. Mumtaz and Salway therefore argue that certain Western concepts embraced in public health practices around the world—specifically the “tendency to over-emphasize the husband-wife relationship to the exclusion of other key actors”—prevents us from clearly understanding intra-household dynamics within non-Western contexts.⁸¹

^{‡‡} Albania,²⁷ Djibouti,³⁴ Ecuador,^{95,96} Ethiopia,⁹⁷ Ghana,^{36,71} India,⁴² Kenya,⁹⁸ Lesotho,³⁹ Malawi,⁹⁹ Mali,^{44,46} Niger,¹⁰⁰ Pakistan,¹⁰¹ and Tunisia.⁶⁷

^{§§} Albania,²⁷ Brazil,²⁹ Chile,⁸³ Colombia,¹⁰³ Djibouti,³⁴ Fiji,¹⁰⁴ Ghana,⁷¹ Guatemala,^{105,106} India, Laos,³⁸ Malawi,⁹⁹ Mali,^{43,44,108} Mauritania,⁴⁸ Mexico,⁹³ Nigeria,^{54,109} Pakistan,⁸¹ Senegal,^{110,111} Somalia and Somaliland,⁵⁸ South Africa,¹¹² and Uzbekistan.⁶²

Based on the gendered nature of household roles and communication patterns, men look to their mothers for advice on issues related to women's and children's health and well-being. At the same time, senior women advise and make demands of their sons and sons-in-law related to these domains.^{41,61,98} Research from Senegal on neonatal health showcases these lines of authority and influence.⁵⁶

Another critical facet of gender-specificity in the household deals with the important distinction between the degree of men's involvement in everyday nutrition-related matters versus their involvement in emergency situations.¹¹¹ Day to day, fathers and grandfathers play secondary, supportive roles to younger and older women. In crisis situations, however, when special logistical and financial support is required, men's involvement typically increases.^{27,30,34,61,62,113}

P. U. Matinga, a Malawian researcher, asserts that although men defend their official title of 'household head' and maintain that they are the main decision-makers, in reality, men's involvement is relatively limited in terms of pregnancy and newborn care. In practice, senior women advise men and their wives about these issues.⁴¹

A man with young children on the advisory status of senior women: *It is the grandmother who plays a major role because she is more knowledgeable about what takes place [when a woman is pregnant], unlike us men. The husband listens to what the grandmother suggests should be done.... That is the husband's role.*⁴¹

While it is important to recognize what may be the dominant cultural role of men/fathers in maternal health and child care, there are significant opportunities for expansion of their role. Pioneering research on fatherhood by the Central American University found that in a sample of more than 4,500 fathers, three types of categories of male contribution to the household were identified: (1) 'Traditional men' (51 percent of men surveyed) assume that men are "by nature" at the top of the family hierarchy and are providers and disciplinarians, through force if necessary. (2) 'Modern men' (39 percent) are affectionate with their children and share responsibility for their upbringing. They reject the use of violence, view contraception as a shared responsibility, and support women's roles outside the domestic sphere. (3) The remaining 10 percent are 'Men in transition', who fall somewhere in between.¹¹⁴ While variations in such typologies exist for each region and culture, this research provides important insights on how to engage men effectively to foster improved family health outcomes. Men can play a vital role in promoting egalitarian decision-making. Through simple and direct strategies, such as the promotion of sharing responsibility for household chores and child care, men can help combat gender discrimination in households and communities.

Summary of grandmothers' and men's roles in support of mothers and young children

Table 1 below summarizes predominant roles played by grandmothers and men related to various aspects of nutrition-related advising, caregiving, and resource mobilization for nutritional needs of infants and young children. The table clearly shows that the roles of grandmothers and men differ significantly. Across cultures, grandmothers are involved in advising and caregiving related to multiple aspects of infant and child nutrition, namely: breastfeeding initiation, techniques, and duration; colostrum; prelacteal feeding; feeding during illnesses; timing and types of complementary foods; and diet of pregnant and breastfeeding mothers. Men, on the other hand, provide food resources to families on an ongoing basis, and financial and logistical resources for health care needs on a routine and emergency basis.

An important point to emphasize, however, is that while grandmothers or senior women may be advising women about the nutrition and health needs of their children, their advice is not always optimal, and in several cases (e.g., provision of prelactal feeds and water, and disposal of colostrum) is significantly detrimental to the child's health. Therefore, any efforts to include grandmothers and senior women in infant and young child feeding programs must ensure that the health and nutrition practices that are promoted are optimal.

Table 1. Roles of grandmothers and men in support of mothers and young children.

Role	Grandmothers	Men
Advising mothers with infants and young children		
Initiation of breastfeeding	X	
Colostrum	X	
Administration of water to infants	X	
Diet and fluid intake of breastfeeding women	X	
Prelacteals/Traditional infusions	X	
Breastfeeding techniques	X	
Breastfeeding duration	X	
Adequacy/Insufficiency of breastmilk	X	
Frequency of infant feeding	X	
Introduction of complementary foods (what and when)	X	
Breastfeeding and diet during childhood illness	X	
Feeding and home remedies for malnourished children	X	
Referral of sick children to 'traditional' and/or 'modern' health providers	X	
Caregiving of children		
Preparation and administration of prelacteal feeds	X	
Disposal of colostrum	X	
Administration of water and other liquids to infants	X	
Preparation of children's foods	X	
Feeding of children	X	
Preparation of home remedies for sick children	X	
Care of sick children (e.g., malnourished)	X	
Bathing of infants and children	X	
Caregiving of mothers		
Assisting with domestic tasks to give mothers more time for child care	X	
Providing direct child care to allow mothers to do other tasks within or outside the household	X	
Emotional support	X	
Financial and logistical support for nutrition and health-related activities		
Provision of food for the family		X
Provision of financial and logistical resources for health center visits and drugs in case of childhood illnesses		X
Provision of financial resources for prenatal, delivery, and postpartum care		X

Grandmother social networks as an indigenous system of collective support for young women and children

Another cross-cutting trend identified in the literature is the existence of indigenous social support networks through which less experienced women receive ongoing advice and support from more experienced women. In both rural and urban settings, this is especially apparent

during pregnancy and childbirth and with newborn care and childhood illnesses.^{***} In all of the societies where extended and multi-generational families are prevalent, informal social support networks organized along gender lines have considerable influence on the attitudes and practices of other network members. The influence of social networks of senior women on younger women's attitudes and practices is further explained by the hierarchical nature of roles and interaction patterns based on gender and age.

For the past 20 years in North America and Europe, extensive research has been conducted on the structure and influence of social networks on individual health-related behavior. In non-Western societies; however, few studies have comprehensively investigated this fundamental facet of social organization.⁴³ Nutrition and health studies referenced in this next section begin to touch on this topic by discussing how senior women within the household and those who are a part of grandmother peer groups and other social networks influence the attitudes and practices of women of reproductive age.

In South Africa, social psychologist G. W. Steuart was one of the first to analyze natural or indigenous helping systems composed of women that provide collective support to other women and families, especially in times of need.¹¹² He referred to them as primary friendship groups that constitute a significant and consistent social support mechanism for their women in collectivist societies. A breastfeeding woman, for example, may receive advice from both younger and older female network members, but the advice from senior members of their social support group tends to be particularly persuasive. This shows that younger women recognize the expertise of senior women and have confidence in their advice. At critical times—during pregnancy, childbirth, and illness—the support provided by these friendship groups intensifies.

In Accra, Brenda McGadney-Douglass and Richard Douglass investigated the influence of senior women within collectivist family systems on child nutrition practices and outcomes. They concluded that collectivist values underpinning intergenerational solidarity facilitate younger women's access to “experience, information, resources and sound decision-making” from powerful senior women within the family and community.⁷⁰ Research by Alayne Adams and colleagues across two different Malian ethnic groups reveals that members of younger women's social networks were overwhelmingly female and mostly family members, although some network members were from outside the family.⁴³ In most cases, those providing support were older than those receiving it. The researchers concluded that women's social networks provide access to a “wide range of resources that mothers mobilize to support the health and well-being of their children, both within and beyond the household.” Relative to international public health standards regarding maternal and child health and nutrition, some of the advice from grandmothers to women and young children is beneficial, while other support is not—for example, giving water and other prelacteal feeds to infants in the first days and weeks of life in Nigeria,⁵⁴ Burkina Faso,³¹ Ghana,³⁵ and Mali.⁴⁷

^{***} Albania,²⁷ Brazil,²⁹ Chile,⁸³ Colombia,¹⁰³ Djibouti,³⁴ Fiji,¹⁰⁴ Ghana,⁷¹ Guatemala,¹⁰⁵ India,^{106,107} Laos,³⁸ Malawi,⁹⁹ Mali,^{43,44,108} Mauritania,⁴⁸ Mexico,⁹³ Nigeria,^{54,109} Pakistan,⁸¹ Senegal,^{110,111} Somalia and Somaliland,⁵⁸ South Africa,¹¹² and Uzbekistan.⁶²



Photo: Judi Aibel

The advisory and supportive roles played by grandmother social networks have been documented for various sociocultural contexts, both rural and urban, though not as extensively. Elsewhere in rural Mali, Camillia Toulmin wrote about the collective support given to new mothers and infants by “groups of elderly women responsible for looking after births in a cluster of neighboring families.”¹⁰⁸ In peri-urban Mauritania, senior women advise and assist other young women in the neighborhood who do not have senior female family members in

close proximity, in addition to supporting their own daughters and daughters-in-law.⁴⁸ Similarly, research from urban Colombia¹⁰³ and Chile⁸³ reveal that senior women who are family have the primary influence over young women’s child nutrition practices, while senior women from outside the family have secondary influence. In two rural areas of Guatemala, Luis Jimenez, Castor Mendez, and Christine Bixiones documented the involvement and influence of mothers, mothers-in-law, traditional birth attendants, or *comadronas*, and other older neighbor women on younger mothers.¹⁰⁵ Research from rural Mexico shows that social networks, primarily comprised of older women, hold the greatest sway over the way women feed their infants.⁹³ In Somalia and Somaliland, the Food Security Analysis Unit documented women’s social networks as a significant source of information on women’s and children’s nutrition and health issues.⁵⁸ Women’s informal communication and support networks in these two ethnically Somali areas are comprised of both familial and extra-familial members, including grandmothers, traditional birth attendants, other senior women, female relatives, and traditional healers. Families in Senegal show similar patterns of communication within social networks, with senior women acting as key advisors and supervisors during pregnancy, delivery, and child care after birth.⁵⁶

Strategies for engaging men for enhanced support of infant health and maternal care

While the integration of men into nutrition programs is limited, there is a history of male involvement in the area of reproductive health upon which to draw.¹⁰² Prior to the 1994 International Conference on Population and Development, international family planning programs focused on barriers to women’s contraceptive use to reduce fertility. After the conference, three primary approaches developed to increase male involvement. The first focused on ‘men as clients’ to engage them in the process of reproduction from their own needs. The second focused on men as partners in decision-making to improve contraceptive use. However, neither of these approaches addressed the gender inequalities that constrain health. The third approach, more in line with the mandates from the conference, emphasized men as agents of positive change.



Photo: Evelyn Hockstein

In health programming, there are several examples of health programs that use the first two approaches and a limited number of programs that involve men as agents of positive change. Impact evaluations of these programs are very few, but the majority of those evaluated have shown positive impacts. One example of a well-evaluated program using the approach of ‘men as agents of positive change’ is the Men in Maternity program in India.¹¹⁵ This study investigated the feasibility, acceptability, and cost of a model of maternity care that encouraged husbands’ participation in their wives’ antenatal and postpartum care. More than 600 couples were assigned to either an intervention or control group. The program resulted in a significant improvement in family planning knowledge and behaviors of both men and women, and men accompanied their wives to the clinics and participated actively in the intervention. Additional examples of effective programming can be found in Greene’s publication on men in reproductive health.

In an effort to understand how best to engage grandmothers and men in nutrition programming, the IYCN Project conducted research in Kenya around these issues.¹¹⁶ The purpose of this formative assessment was to document how best to engage and support men and grandmothers to improve maternal and infant nutrition.

Researchers found that while men are currently not involved in the direct care and nurturing of women and young children, there was clear interest in obtaining information to promote this within their families. Men desired to learn from trained experts or professionals (generally other men) on nutrition and health issues and were more likely to gain awareness through these communication strategies.¹¹⁶ The creation of men’s groups led by experts is an important method of enhancing men’s participation in maternal and child health and nutrition issues.

These examples demonstrate the possibility of positively addressing issues of gender inequality that are known to lead to poor health for women and children through the active engagement of men. It also shows that existing cultural norms can evolve for the betterment of households and communities.

Programmatic involvement of grandmothers and men

Approaches to infant and young child nutrition interventions involving grandmothers and men

The majority of community nutrition and health programs implemented by governments, foreign development organizations, and local nongovernmental organizations do not explicitly and actively involve either grandmothers or men. The following section identifies those programs that *have* involved either grandmothers and/or men, the approaches used to include these groups, and their results. The electronic literature search for this report revealed only 14 child nutrition and health program interventions involving grandmothers or men. Additional lessons that could be applicable to infant and child nutrition programs are found in six programs with reproductive health activities identified in which men have had a role. None of the reproductive health

projects reported grandmother-inclusion. Appendix B summarizes the nutrition and health issues addressed in each of these programs, the strategies applied, and the evaluation results, where they were reported. Of the 20 community interventions reviewed, 18 were referenced exclusively in the gray literature, while in two cases, peer-reviewed journal articles reported on these programs.^{69,99} From the information from the 14 child nutrition and health programs, the following conclusions can be drawn.

Formative research

In the majority of the programs reviewed, both qualitative and quantitative formative research centered on family-level nutrition and health practices. In most cases, data collection focused only on the knowledge, attitudes, and practices of mothers of young children, and in a few cases, initial qualitative research included a more comprehensive analysis of the roles, influence, and communication patterns among key household actors.^{†††}

Program objectives and indicators

In almost all of the programs, indicators at the household level dealt with the knowledge, attitudes, and practices of women of reproductive age. In two programs—a ChildFund child survival project in Senegal and a Helen Keller International (HKI) project in Mali—household-level indicators related to both women of reproductive age and grandmothers (mothers-in-law). These two examples reflect program planners’ recognition of grandmothers’ central role and influence and their commitment to tracking changes in grandmothers’ knowledge and advice.

Conceptual framework and methods for health communication and education

Ten of the child nutrition and health programs reviewed were based on an individual behavior change or behavior change communication framework. This means messages were developed on various nutrition and health topics, tailored to different *audiences*, or target groups, and disseminated through various channels. In three cases, grandmothers were included as a target group, but men were not. In the seven other projects, both grandmothers and men were involved to some extent. In almost all cases in which either grandmothers and/or men were involved, limited information in project documents made it difficult to determine their degree of involvement, or exactly how they were involved.

Different communication methods and tools communicated key messages throughout the projects reviewed. In Bolivia and Ghana, the Academy for Educational Development used mass media and developed print messages disseminated through flipcharts, client brochures, calendars, and counseling cards to grandmothers, men, women, and other community groups. In Rwanda, the BASICS project used radio and posters to convey messages to grandmothers and men. In the Mass Media Health Project (MMPH) in Honduras, message channels used to reach grandmothers included mass media, interpersonal communication, and print materials.

At both the conceptual and methodological levels, programs faced a distinct option in terms of whether to focus on individual behavior change or on promoting changes in community norms.

^{†††} Mali,⁴⁷ Albania,²⁷ Senegal,⁶⁸ and Mauritania,⁴⁸ and to a lesser extent in Malawi.⁹⁹

Clearly, the conceptual choice made by the majority of programs to focus on individual behavior change determined the methods employed.

In Senegal with ChildFund and in Mali with HKI, the conceptual framework for the community strategy was based on a communication for social change orientation,⁵ which focuses on promoting changes in collective norms through peer group activities, primarily with women of reproductive age and grandmothers, but also with male community leaders. The HKI project explicitly aimed to promote changes in community nutrition norms by focusing primarily on grandmothers. In both of these projects, communication/education activities included the use of open-ended stories (to elicit dialogue on key topics), songs, and group discussion among peer groups of women, grandmothers, and male community leaders.

Grandmother-inclusive nutrition and health programs

In most programs that involved grandmothers, the grandmothers participated in group activities with women of reproductive age. At the outset of World Relief's project in Mozambique, special 'care groups' were organized with grandmothers, but later abandoned. In grandmother-inclusive programs in Mali and Senegal, however, some activities were organized separately with groups of grandmothers and with groups of women of reproductive age. Given the importance of hierarchy and the stratification by age in African



Photo: Judi Aubel

societies, people are usually more comfortable with those in their own age group. Special grandmother-only activities showed recognition of grandmothers' status and expertise in the domain of child nutrition and health and allowed younger women to feel free to discuss sensitive topics without the presence of their in-laws. In both of these programs, the community approach was derived from a methodology developed by the Grandmother Project, in which grandmothers are accorded preferential status in community activities to reflect their prominent traditional status in the society at large.⁶⁹

Health worker trainings were a component of various projects, with the objective of strengthening health workers' knowledge of and attitudes around infant and young child nutrition and other health topics. The HKI project in Mali and the ChildFund project in Senegal noted health workers' overwhelmingly negative attitudes toward senior women. By reviewing records of discussions with health-sector staff and international donors, several negative stereotypes became evident.¹¹⁷ Nutrition and health-sector staff criticized grandmothers for practicing nutritional taboos and for using traditional remedies. Because many senior women are illiterate, they are often viewed as ignorant—an attitude that equates school learning with intelligence and undervalues experiential life-learning. Another negative stereotype is that because of their age, grandmothers are incapable of learning new things and/or changing their ways. Many assume



Photo: Judi Aibel

that grandmothers are resistant to change and that it is, therefore, a waste of time to involve them in health development activities. Finally, grandmothers are often perceived as needy, an attitude that can preclude them from being seen as a resource to others. Caroline Sweetman asserts that “older people and older women in particular are influenced by the negative stereotypes about old age that surround them.”¹¹⁸ These stereotypes contribute to the continued exclusion of senior women from public health and nutrition models, policies, and programs. Training activities by both projects worked to transform the perspectives of health workers, from viewing grandmothers as an obstacle to viewing them as an ally.

Based on formative research in Kenya to examine the role of grandmothers in infant and young child feeding, it was clear that grandmothers are highly esteemed within communities as knowledgeable and experienced in child care as well as powerful decision-makers in infant and young child feeding. However, grandmothers also appeared to have inadequate knowledge of optimal feeding behaviors. Gathering grandmothers together in support groups or other naturally existing groups is considered a potentially effective method of engaging senior women and educating them on best feeding practices for the family. It is also suggested that other activities in addition to education on infant and young child feeding be encouraged to enhance group cohesion and sustainability. Continued research is necessary to document the impact of these grandmother groups on infant and child nutrition and health.

All of the projects involving grandmothers reported that the participation of senior women was beneficial insofar as it provided them with access to the same nutrition and health information as that provided to younger mothers, thereby improving grandmothers’ advice and support to younger mothers. After formal review, many of the projects reported positive changes in women’s nutritional and health practices with young children. Only the HKI and ChildFund projects, however, formally assessed changes in grandmothers’ knowledge and advice to younger women on key child nutrition and health practices at baseline and endline. In both cases, results showed statistically significant changes in terms of indicators, including women’s diet during pregnancy, early initiation of breastfeeding, and complementary feeding.^{30,47}

Men/Father-inclusive nutrition and health programs

In the project documents reviewed, descriptions of strategies involving men were not sufficiently detailed to be conclusive. In many cases, project reports stated, for example, that “men were involved in community discussions” or “in community activities.” In behavior change communication strategies, tailored messages targeted men, mostly through the media. In India, Mexico, and Uganda, a project supported by the Interagency Working Group on Gender used the Stepping Stones methodology¹¹⁹ to involve men in participatory workshops, challenging them to reflect on their roles as men and fathers in the family, and to help break down gender



Photo: Satvir Malhotra

stereotypes. This is one of the few programs that has applied a life-course approach to educating and integrating boys and men from several life stages within the health program.

This review did reveal some programs that have demonstrated a positive impact on decision-making around child health. The Indian Men in Maternity program resulted in increased knowledge on health and family planning among couples and greater interspousal communication around child feeding. Another program, Suami Siaga in Indonesia, showed promising results of male engagement for birth preparedness and improved interpersonal communication among spouses.

A recent World Health Organization (WHO) publication reviewing the role of engaging men and boys in health programs presents some promising results.¹²⁰ This review documents the following changes in behavior that have been reasonably well confirmed through evaluations of health programs that have included men and boys, including:

- A decrease in self-reported use of physical, sexual, and psychological violence in intimate relationships.
- Increased contraceptive use.
- Increased communication with spouse or partner about child health, contraception, and reproductive decision-making.
- More equitable treatment of children.
- Increased use of sexual and reproductive health services by men.
- Decreased rates of sexually transmitted diseases.
- Increased social support of spouse.

This WHO review documents the best practices for engaging men in health programs, which can serve as models for infant and young child feeding programs in the future. Group education, which can range from single discussions to regular weekly sessions, has been found to effectively communicate concepts, knowledge, and ideas to encourage men's participation in health activities. Evidence has shown that group sessions alone can lead to behavior change; however, group sessions in combination with other campaigns (e.g., mass media, individual counseling) can lead to even more substantial improvements in attitude and behavior. In addition, service-based programs, such as those that provide disease screening or counseling, that have recognized men as allies or partners, rather than antagonistic or obstacles, have been shown to lead to positive behavior change.

However, this review also emphasized that relatively few programs with men and boys go beyond the pilot stage or short-term time frame. For these projects to reach larger populations, efforts are needed to understand how to get to scale programs that are sustainable and can demonstrate long-term change in behavior.

Involvement of grandmothers in promotion of optimal infant and young child feeding among HIV-infected mothers

From an HHPH perspective, strategies to support HIV-infected women should be based on an analysis of the household contexts within which they live, including the roles and influence of different actors and culturally prescribed norms related to infant and young child feeding. From this perspective, interventions should build on existing household roles and dynamics. The following section of this report examines literature dealing with the intra-household context within which HIV-infected women and infants are nested, and specifically the roles played by grandmothers. It then discusses the PMTCT interventions that have explicitly involved grandmothers primarily from East and Southern Africa.



Photo: Judi Aubel

In HIV-prevalent areas, the major public health challenge related to preventing transmission of the virus to infants and young children is appropriate infant and young child feeding. Current recommendations from WHO on infant feeding within the context of HIV propose that women exclusively breastfeed for six months, and then progressively introduce complementary foods and continue to breastfeed at least until their child is 12 months of age, unless the environment and social circumstances permit effective replacement feeding.¹²¹ This recommendation contrasts with cultural norms for many of these contexts, which often dictate breastfeeding well beyond 12 months and giving water to children younger than 6 months. Given the collectivist nature of life in most societies in Africa, Asia, and Latin America, HIV-positive women will likely reveal their HIV status if they adopt WHO's recommended infant and young child feeding practices, since the practices do not coincide with cultural norms. A major constraint for PMTCT programs, therefore, is that many women must reveal their HIV status to participate, causing them to fear stigmatization and/or rejection by partners, families, and the community.

A fundamental facet of infant and young child feeding is that it is not a private or individual behavior. As Susan Reynolds Whyte and Priscilla Wanjiru Kariuki argue in their discussion of malnutrition in Western Kenya, "mothers and children do not form isolated dyads."⁸ Rather, infant and young child feeding takes place within the social context of the family. Whyte and Kariuki have criticized program approaches that ignore this fact, noting that "while nutrition intervention programs tend to treat women as individual actors, women see themselves as enmeshed in social relationships which affect their ability to care for their children."⁸

In the infant and young child feeding literature dealing with HIV-prevalent contexts, much of the research on the attitudes and practices of HIV-infected women is formulated from an epidemiological and/or psychological orientation, which aims to assess cognitive parameters related to individual behavior (e.g., identifying factors that contribute to women's non-compliance with prescribed infant and young child feeding recommendations), but does not examine intra-household roles and dynamics.^{77,122-126}

Buskens and colleagues were some of the only researchers to investigate intra-household dynamics. Their studies in Southern Africa, based on a systems framework, employed in-depth ethnographic methods to understand women's infant and young child feeding practices from the cultural and family systems perspective. Through their research, they found that grandmothers are the overriding authorities on infant and young child feeding at the household level and that younger mothers recognize and follow the experience of these senior advisors (who are their own mothers or mothers-in-law and their children's grandmothers). The majority of mothers said that although health workers told them to exclusively breastfeed for six months, they tended not to follow that advice.

PMTCT programs include the promotion of drug technologies like antiretroviral therapy, and promotion of specific feeding practices. The focus of this discussion is on PMTCT interventions that promote optimal feeding practices for infants (exclusive breastfeeding before 6 months of age) and young children (introduction of complementary foods as of 6 months, with continued breastfeeding). From the literature reviewed, the predominant strategy to promote optimum infant and young child feeding in PMTCT programs involves education-counseling usually carried out in health facilities. All programs reviewed have focused on HIV-positive mothers,¹²⁷ a few have involved men,^{99,128} and none have involved grandmothers.

A review of infant and child feeding strategies over the past ten years by Karen Marie Moland and her colleagues showed that "both exclusive breastfeeding and replacement feeding have been extremely difficult to adhere to for the large majority of the HIV-infected mothers."¹²⁹ Many other studies and reviews also conclude that strategies to promote optimal infant and young child feeding within the context of PMTCT programs have not produced anticipated results. These studies conclude that a major factor inhibiting young women from adopting the recommended feeding practices are the attitudes of and pressure from family members.¹³⁰⁻¹³² Most of the PMTCT interventions referenced in the literature do not systematically deal with household-level constraints, but instead focus on health facility-centered and health worker-driven activities.

The research identifies several attitudes that directly or indirectly constrain women from adopting recommended feeding practices. First, most women hesitate to disclose their HIV status for fear of stigmatization and possible rejection by both family and community members. Failure to disclose their HIV status precludes their adoption of unconventional feeding practices. Second, within and around households, there are culturally designated advisors on infant and young child nutrition, such as elder women with whom mothers have much more contact than with health workers. These senior women often promote culturally normative beliefs and practices, like giving water, infusions, medicinal potions, etc., to very young children (younger than 6 months) and extended breastfeeding well beyond 12 months. These proposed or culturally grounded practices are incompatible with approaches recommended by health center counselors.

Other widely held and culturally engrained beliefs communicated by grandmothers that are incompatible with exclusive breastfeeding: the notions that immediately after birth, it takes time for the breastmilk to flow and that many women have insufficient breastmilk. They therefore believe that very young infants need additional fluids and other types of milk or solids.

Given the weight of household influences, PMTCT programs should systematically analyze and address constraining factors at that level. While grandmothers are frequently viewed as one of these constraints, several community nutrition and health programs in West Africa have shown that their authoritative role can be transformed into a program asset or a resource for change.⁶⁹ At the international and country levels, discussions on programming options for PMTCT focus on the technical aspects of infant and young child nutrition, while giving limited attention to the interface between technical recommendations to HIV-infected women and the household realities in which they live. The most recent WHO guidelines on HIV and infant and young child feeding, for instance, give extensive recommendations on activities based within the health system, but fail to mention activities within the household and community, where women and children spend the majority of their time.

Buskens and colleagues underline the tension that exists between WHO's technically sound recommendations on feeding in HIV-prevalent settings and their application at the household level by anxious and disempowered mothers. They note that HIV-positive women are torn between the advice on infant and young child feeding received from health workers and the advice received from family-level advisors, and who are then expected to somehow make bold and autonomous decisions that go against the normative practices prescribed by their families:

*Are we not asking them [HIV-positive mothers] to challenge both their own and traditional systems of belief and influence, including challenging those in authority over them (i.e., elder women and men), to challenge both patriarchy and their own internalized feelings of dependence, deficiency and disempowerment; asking them to risk being the first to be seen to bring HIV into their family by disclosing their status despite their own feelings of shame or guilt.*¹³³

This challenge highlights the conundrum HIV-infected mothers face, and pushes us to reexamine the expectations that PMTCT programs have for these women. Moland and colleagues also acknowledge the very challenging situation confronting HIV-infected women, writing that there is a “growing recognition that without support for the women who must relate to difficult infant and young child feeding regimes, there is little chance to succeed.”¹²⁹ AIDS researchers Tanya Doherty and colleagues argue that in order to adopt exclusive breastfeeding, support strategies must provide these women with confidence, knowledge, and skills.¹³²

What are the best sources and strategies for providing much-needed support to HIV-positive women related to infant and young child feeding? This depends in part on the conceptual framework and premises from which policy and program developers operate. From a biomedical health services perspective, interventions are more likely to involve activities at health facilities by engaging health workers, the official “counselors” or “advisors” within these institutions. From a behaviorist and risk perspective, the nexus of the problem resides with the HIV-infected woman, and the appropriate intervention involves education and counseling to encourage the woman to take independent and assertive action. From a social-ecological and HHPH

perspective, a support strategy should be rooted in the sociocultural system and family structure and should involve the human resources therein who are designated to support women and young children (primarily experienced elder women and also other women).

Virtually all PMTCT programs today are framed in a health services and behavioral orientation. Most interventions focus on the facility and the health worker, including counseling for individuals and sometimes peer



Photo: Judi Aibel

groups, to encourage HIV-positive women to adopt optimal infant and young child feeding practices.¹²⁷ Through counseling, program planners try to provide women with information on harmful feeding practices that can increase the risk of transmission and motivate them to make an intelligent, informed choice regarding how they will feed their infant.^{76,129,132,134-136} In reports on PMTCT programs in Tanzania¹³² and Botswana,¹³⁷ for example, counseling and support provided to women seek to empower them to “resist family pressure” or “to deal with stigma and discrimination” from family and community members. It is important to examine the premises underlying these approaches, which assume that individual women can overcome multiple contextual constraints and adopt recommended practices.

The reductionist and individual behavior change approach applied by these PMTCT programs is reiterated in guidelines from the Joint United Nations Programme on HIV/AIDS (UNAIDS) Inter-Agency Task Team on the design of PMTCT programs.¹³⁸ The task force recommends including tailored messages for pregnant women and their partners, counseling and support to empower HIV-positive mothers to make informed decisions on infant feeding, and behavior change communication in programs aiming to promote optimal infant feeding. The guidelines do not call for strategies to analyze cultural and family caregiving structures or to identify household and community resource persons. Neither the UNAIDS nor the WHO guidelines (referred to above) recommend engaging culturally designated family support persons in such programs, or call on health providers to involve these supporting actors in community infant feeding activities. The expectation of these groups is that informed and empowered women will adopt prescribed practices in spite of the constraining factors in their cultural and familial environments.

While not specifically a PMTCT program, an agriculture and nutrition project in an HIV-prevalent area of northern Malawi involved grandmothers in its breastfeeding and complementary feeding component, taking a holistic view of families and their needs.⁹⁹ Despite grandmothers’ involvement over several years, however, people were unwilling to adopt alternative child feeding practices proposed by health workers and did not abandon several

harmful nutrition practices, such as giving root infusions and porridges to young babies. The researchers concluded that grandmothers' resistance to new ideas was due, in part, to their attachment to culturally grounded ideas regarding malnutrition and also to the negative attitudes toward them from hospital outreach workers, who they said undermined their status in the community by criticizing their "incorrect" feeding practices. This example illustrates that inclusion of grandmothers in and of itself is not sufficient for them to embrace approaches to infant and child feeding that conflict with traditional practices. If grandmothers' roles and expertise are not respected, they will be unlikely to embrace new practices proposed by their critics.

The exclusion of grandmothers from PMTCT programs stems from the fact that those in the field of HIV/AIDS have ignored two significant bodies of research: one, the evidence of the role and influence of grandmothers within households as it relates to child and maternal nutrition; and two, research in the field of social sciences in health that documents the influence of the social environment on individual behavior and decision-making.^{2,4,20} Researchers conducted a bulk of this social science research in Western societies, where families tend to be more individually orientated. In more collectivist societies, the sociocultural context has a greater impact on individual attitudes and practices.

Involvement of men in promotion of optimal infant and young child feeding among HIV-infected mothers

The rationale for men's involvement in PMTCT infant and young child feeding programs appears to be two fold. First, it is widely assumed that men are the lead household decision-makers in matters related to women's and children's well-being.^{102,139-141} Second, it is assumed that social support to HIV-positive women can best be provided by men. Although both of these assumptions are somewhat flawed, program planners choose community interventions that are directly tied to them.



Photo: Ludmillo Pierre

The impetus for men's increased participation in these programs stems, in part, from the commitment to greater men's involvement articulated at the 1994 International Conference on Population and Development rather than from the systematic analysis of men's roles and influence in cultural and family systems. PMTCT programs aiming to support HIV-positive women and their offspring should involve all key household resource persons. While it is beneficial to promote men's involvement in PMTCT infant and young child feeding priorities, it is also important to recognize that other household members are knowledgeable about infant and young child feeding.

In considering ways to expand men's involvement in PMTCT programs, it is important to remember the significant differences between the role of male partners in individualist societies and those of men in collectivist societies. It is often erroneously assumed that the role, attitudes, communication style, etc., of men in relation to women in collectivist societies are, or should be,



Photo: Evelyn Hockstein

the same as they are in individualist societies.⁸¹ These assumptions constitute a significant source of weakness in program logic and contribute to diminished program outcomes.

An extensive literature search revealed only two examples of interventions in which men were involved in HIV and infant feeding programs, one in Tanzania¹²⁸ and one in Malawi.⁹⁹ In a GTZ (German Technical Assistance Agency)-supported antenatal and PMTCT program in Tanzania's Mbeya Region, partner involvement was a key

component. The program viewed men as key decision-makers regarding reproductive health issues and therefore an important source of support to HIV-positive women during pregnancy and with child care after delivery. After several years of implementation, an analysis of the program showed multiple constraints to men's participation in joint counseling sessions on PMTCT, including on infant feeding; as a result, men's involvement in these sessions increased by only 7 percent over the life of the program. Health service staff reported that they were not accustomed to dealing with men. In addition, men viewed children's health issues as within the female domain. Male partners said that while they wanted to support their wives' and children's nutritional needs, they saw themselves as solely responsible for providing food and security for the family, not for direct child feeding or care.

Through a program in Malawi associated with Ekwendeni Mission Hospital, which has an extensive community health program, men participated in teams of community volunteers to promote breastfeeding and complementary feeding through home visits. During these visits, one of the topics discussed was family cooperation, including the need for men to be more involved in child care and feeding. Despite the emphasis on male involvement, there was considerable resistance on the part of both men and grandmothers to modify men's role in child care, and villagers and project staff in the area were uncomfortable promoting changes in men's role related to child nutrition. After several years, however, there is growing evidence that some men are willing to take on a greater role in child care and feeding.⁹⁹

In these two examples, the limited receptivity of men to being directly involved in child nutrition and caregiving activities suggests that the interventions asked men to make fundamental changes in their role that they were not prepared to make. Before proposing these types of changes, it is important for health and development programs to reflect on the impact that alternative strategies might have on the social cohesion of the family and community. It does not appear that formative research was conducted in either of these cases to investigate family member roles and decision-making as a basis for deciding which household actors should be involved and in what capacity. Rather, the decision to include men was based on conventional thinking about the decisional power they hold within households.

While very few PMTCT programs focusing on infant and child nutrition have attempted to involve men, numerous programs focusing on HIV testing and disclosure have aimed to include them. The following section reviews reports on some of those programs.

Many testing and disclosure programs target men first, to encourage them to be tested and to inform them about their partner's HIV status. The

objective of these programs is to promote open and transparent communication between the sexes related to seropositivity and to increase support from men to HIV-infected women. In the case of PMTCT programs, it is often presupposed that male involvement will strengthen communication and mutual support between partners. As in other areas of maternal and child health, it is generally assumed that men's involvement in PMTCT programs will be beneficial to their partners, but research from the field does not always support this assumption.



Photo: Evelyn Hockstein

After reviewing PMTCT programs in 15 African countries, Juha Auvinen and colleagues concluded that male involvement was advantageous but also noted potential concerns: “Male participation has both increased and inhibited pregnant women’s acceptance of PMTCT programs.”¹⁴² While these researchers conclude that in most cases, male involvement has a positive effect, several studies have documented the negative consequence of male-involvement strategies, which include verbal and physical abuse at disclosure and even divorce.^{†††} In a study of a PMTCT program within the matrilineal context of rural Malawi, where married men reside with their wives in the village of their in-laws, men reacted very negatively to disclosure of their wives’ HIV-positive status. In fact, every member of the small sample of women reported that their husband abandoned them when they learned about their seropositive status. Researchers John Njunga and Astrid Blystad note that communities refer to this project as the “divorce program,” which explains the population’s decreased participation in the program.¹⁴⁴ Njunga and Blystad recommend a formative assessment of cultural contexts prior to program design. Many programs, however, have not seriously considered this recommendation. Only one study on PMTCT programs was identified in which there was an extensive initial investigation of the roles and influence of key household actors and intra-household dynamics related to health.¹³³

There are examples of other ‘men-focused’ HIV-centered programs that have led to positive outcomes in attitudes and behaviors. In a program in Guinea,¹⁴⁶ community outreach and mobilization for men resulted in increased communication and approval around family planning, but no significant increase in family planning use. Another HIV program focused on including men in Nicaragua¹⁴⁷ demonstrated increased communication on contraceptives, greater condom

††† Botswana,¹³⁷ Kenya,¹⁴⁵ Malawi,^{134,144} and Tanzania^{128,130,143}.

use, and uptake of HIV testing. A multi-country study in Brazil and India of group education for men found significant positive changes in gender attitude, self-reports of sexually transmitted disease, condom use, and harassment of women. These examples demonstrate that while significant challenges may exist in integrating men into health programs, significant positive change in both attitudes and behaviors are possible.

The need for a change in the focus of international guidelines

International guidelines developed by reputable organizations define priority orientations for both policy and program parameters. After reviewing guidelines produced by organizations such as USAID¹⁴⁸ and Save the Children,¹⁴⁹ it was evident that no recommendations exist to address the central role of senior women in nutrition and health at the family level, nor clearly recommend their involvement in community programs. Although attention to male involvement is somewhat greater, it is still limited.

WHO, for example, published three leading documents on developing community infant and young child nutrition and health programs^{§§§} that fail to take into account the role of senior women. Although a 2003 WHO/United Nations Children's Fund strategy document makes frequent reference to the important roles played by "mothers, families, and other caregivers" in ensuring optimal feeding practices and mentions the role of fathers several times, there is no discussion of the active role of grandmothers and/or other elder women or the need to involve them in programs.¹⁵¹ The USAID *Technical Reference Materials on Nutrition*,¹⁴⁸ one component of a larger guide for development of child survival projects, also references the need to involve "mothers and other caregivers," but does not explicitly acknowledge the central role of grandmothers, nor does it suggest that they can be key actors in infant and young child feeding strategies. The Save the Children publication, *Saving the Lives of Mothers and Newborns*, discusses the need for culturally appropriate solutions but does not mention involving grandmothers, despite their central role in delivery and newborn care.¹⁴⁹ Similarly, a CORE Group document on newborn care, focusing on Latin America and the Caribbean, discusses the need to involve culturally respected figures, but does not mention grandmothers.¹⁵³ The failure of these and other international organizations to explicitly acknowledge the role of grandmothers and promote grandmother-inclusion contributes to the exclusion of senior women by policymakers and program planners.

§§§ WHO has produced three important documents specifically to support development of community infant and young child nutrition and health programs: *Community-based strategies for breastfeeding promotion and support in developing countries*¹⁵⁰; with the United Nations Children's Fund, a document entitled *Global strategy for infant and young child feeding*¹⁵¹; and *Family and community practices that promote child survival, growth and development*.¹⁵²

Discussion

The literature reviewed supports the conclusion that in many societies in Africa, Asia, and Latin America, infant and young child feeding usually takes place within the context of multi-generational and extended families in which collectivist values and child care prevail. Community interventions to promote maternal and child nutrition and health should first understand the family and community contexts within which women and children are embedded, and then build on and strengthen the roles of key family actors to optimize their contributions to the well-being of children and women.

In the literature reviewed, several patterns are consistently observed that relate to the community contexts within which women and children are nested: gender-specificity in roles, age hierarchy, and collective decision-making related to issues dealing with children and women; the centrality of the grandmother's role as advisor of younger women and men, and as caregiver of both women and children, especially during pregnancy and childbirth, and with infants and young children; social networks of senior women exerting a collective influence on maternal and child nutrition-related practices, especially during prenatal and neonatal periods; and the limited role of men in day-to-day decision-making and caregiving associated with nutrition-related activities with children and women.

This review highlights the fact that senior women, or grandmothers, play a lead role in making household decisions about maternal nutrition, pregnancy and delivery, newborn care and feeding, complementary feeding, and care for sick children. Husbands and fathers take on an indirect and supportive role, providing food for the family and financial and logistical resources for routine and emergency health care; however, their role can be expanded to further support their families.

It is shown that very few infant and young child nutrition programs have explicitly involved either grandmothers or men. The need to develop strategies that involve these groups based on their distinct, but complementary roles at the household level is critical for effective health programming. Positive examples from the field indicate that creation of local support groups for men and senior women as well as programs that use these individuals as 'agents of positive change' can be examined as potential strategies.

Formative research for health and nutrition programming should be refocused to include intra-household roles, influences, and communication patterns. The review indicates that most programs focus on individual behavior change, mostly among women of reproductive age, failing to account for the family and cultural systems influencing these women. Where grandmothers and/or men were involved, their participation was generally limited. The formative research should try to address the gaps in understanding of the sociocultural context, including the continued predominance of risk-oriented and individual-focused interventions; negative biases toward elders, and grandmothers in particular; the lack of inclusion of men in women's and children's health issues; the lack of attention to sociocultural context and the influential roles of grandmothers and men in international guidelines; and institutional resistance to change.

Including grandmothers is especially important in PMTCT programs. HIV/AIDS researchers acknowledge that the results of infant and young child feeding strategies over the past ten years have been disappointing.¹²⁹ A major constraint to improving these results and convincing women to adopt recommended infant and young child feeding practices are the attitudes and pressure of other family members, particularly elder women. Despite the evidence that links household-level factors to infant and young child feeding behavior in the majority of PMTCT programs referred to in this literature review, programs focus almost exclusively on health facility-centered and health worker-driven activities. PMTCT program strategies should systematically analyze and address household-level constraints *and* household-level resources. Although elder women are frequently viewed as an obstacle, several experiences in West Africa have clearly shown that they can, in fact, be a very beneficial resource for community nutrition and health programs.

Likewise, men, who have traditionally been viewed as having a limited role in the household (focused on financial support), can be encouraged to participate in family health matters as a means of enhancing overall cohesion in the family and improved household health outcomes. Data from reproductive health programs have demonstrated that significant improvement can be seen with the inclusion of men as ‘agents of positive change’ within their household.

This review shows that global guidelines on policies and programmatic approaches focus primarily on technical aspects of infant and young child nutrition, while giving limited attention to the interface between these technical recommendations and the household contexts within which HIV-infected women and their children are embedded. From a social-ecological and HHPH perspective, a support strategy for women should be rooted in extended and collectivist family and community systems and should involve those who are culturally designated to support women and young children. The predominant orientation of most PMTCT programs promotes individual behavior change among HIV-prevalent mothers to empower them to resist family pressure and to comply with culturally grounded norms. This approach places the onus on the HIV-positive woman to overcome multiple contextual constraints. It also ignores the omnipresent indigenous support system, composed of female kin and non-kin members of women’s social networks, which constitute an invaluable support mechanism.

Both grandmothers and men play critical and complementary roles in promoting the nutritional and health status of children and women of reproductive age. It is important that programs understand the specific roles of these two groups, as well as the relationships between them with women and young children.

Recommendations for future policies and programs

General recommendations

Pay attention to socioculture context. Policies and programs to promote improved infant and young child nutrition in non-Western societies, including those in areas of high HIV prevalence, need to give greater attention to the sociocultural context within which women with infants and young children are embedded. The majority of community interventions ignore the culturally designated roles and hierarchies that drive family-managed strategies to promote the nutritional and health status of its members, particularly children and women. The failure of most community programs to explicitly involve grandmothers as culturally prescribed authorities has contributed to a limited receptivity among communities to alternative practices to nutrition and health. In addition, the role of men should be encouraged to be explored and expanded within the context of maternal and child programs in order to increase their effectiveness. In operational terms, this recommendation highlights the need for intervention strategies that adopt a more social-ecological and family-focused approach rather than one focused on one or more segments of the family system (e.g., the mother-child dyad or the reproductive couple).

Understand household roles and relationships. Both grandmothers and men play important and complementary roles in promoting the nutritional and health status of children and women of reproductive age. It is essential that programs understand the gender-specificity of these two key categories of household actors, as well as the relationships between them with women and young children. A better understanding of these two groups will strengthen their roles and relationships rather than pull apart interrelated elements of household systems.

View grandmothers and men as resources, not as obstacles. Grandmothers and men should be actively engaged in strategies that promote optimal nutrition practices for children and women. It is often assumed that grandmothers are unable to learn and change their advice and practices or that men have no interest in issues related to women and children, and these assumptions are sometimes used to justify excluding them from community nutrition and health interventions. A number of recent nutrition and health programs have seen grandmothers and men as resources and not necessarily averse to embracing new ideas.

There is some evidence that an additional benefit of culturally grounded programs is that they can also contribute to greater social cohesion. From a systems perspective, this makes sense. Grandmother and men-inclusive nutrition and health programs can strengthen communication and cohesion within family systems, which can have other far-reaching and positive benefits for children, women, and families.

Specific recommendations for future policies and programs

To put the broad recommendations proposed above into practice, the following specific recommendations are proposed.

Pay attention to the socioculture context. Policies and programs to promote improved infant and young child nutrition, including for HIV/AIDS-prevalent areas, need to give greater attention to the sociocultural context within which women with infants and young children are embedded.

Conduct formative research as a basis for more culturally grounded interventions.

Programmers should carry out a formative assessment in each cultural setting to understand not only the knowledge, attitudes, and practices of key household actors related to infant and young child nutrition but also the roles, norms, communication networks, and decision-making patterns within household and community settings. Various formative research instruments are available for information collection on knowledge, attitudes, and practices. However, there is a need for development of innovative research tools based on a more systemic approach to analyzing household and community contexts. These tools need to be developed to help program practitioners to systematically investigate the roles, influence, communication, and decision-making patterns among key household actors.

Modify objectives and indicators to fit the sociocultural context. Evolving toward a more social-ecological and family focus requires shifting from a risk and behavioral orientation in which objectives and indicators focus only on women, infants, and young children to a broader systems approach in which objectives and indicators also include other family actors who influence these risk groups. More specifically, programs that acknowledge the role and influence of grandmothers on nutrition and health should develop program objectives and indicators that assess grandmothers' knowledge, advice, and practices.

Adopt a family-focused systems approach. All infant and young child nutrition interventions should adopt a systems approach in which the family is the unit of analysis for formative research and program design. Families are multi-generational even when extended family members do not live under the same roof. Programs should aim not only to promote change within family systems, but also to strengthen the links between family members of different ages and sexes.

Build on the roles of women, grandmothers, and men. Programs should build on and strengthen the capacity of different household actors to assume their culturally designated roles. Objectives and indicators should be expanded to reflect this family-centered approach.

Build on efforts to promote men and grandmothers as 'agents of positive change'.

It is critical to identify methods to enhance the positive contribution of these individuals on overall household health. Understanding their role as positive change agents begins to remove the social and cultural barriers that lead to negative stereotyping in these societies.

Train health workers to use non-directive communications. To promote the adoption of culturally adapted and grandmother-inclusive approaches, health-sector staff and community health workers must have positive attitudes toward local cultural roles and realities and toward

grandmothers in particular. They must see grandmothers as a resource rather than an obstacle. In addition, they need to be skilled in non-directive communication and education approaches based on adult learning principles.

Focus health training on family and cultural systems. The curriculum of basic health training in schools should be revised to give greater attention to family and cultural systems and to methods for understanding and incorporating elements of both into programs developed by health services.

Promote changes in community nutrition norms. Given the far-reaching impact of community norms on individual practices in collectivist societies, programs that seek to bring about sustainable changes in infant and young child nutrition practices should aim to promote changes in community nutrition norms. Because nutrition norms are set by community experts who define and reinforce certain rules of conduct, promoting changes in community norms requires strategies that work with and through grandmother peer groups.

References

1. Pepitone A. Lessons from the history of social psychology. *American Psychologist*. 1981;36(9):972–985.
2. Glass TA, McAtee MJ. Behavioral science at the crossroads in public health: extending horizons, envisioning the future. *Social Science & Medicine*. 2006;62:1650–1671.
3. Stokols D. Translating social ecological theory into guidelines for community health promotion. *American Journal of Health Promotion*. 1996;10(4):282–298.
4. Burke NJ, Joseph G, Pasick R, Barker JC. Theorizing social content: rethinking behavioral theory. *Health Education & Behavior*. 2009;36(Suppl 5):S55–S70.
5. Figueroa ME, Kincaid DL, Rani M, Lewis G. *Communication for Social Change*. Working Paper No. 1. Rockefeller Foundation and Johns Hopkins University Center for Communication Programs. New York, NY: Rockefeller Foundation; 2002.
6. Triandis H, Gelfand MJ. Converging measurement of horizontal and vertical individualism and collectivism. *Journal of Personality and Social Psychology*. 1995;74(1):118–128.
7. Airihibuwa CO. *Health and Culture: Beyond the Western Paradigm*. Thousand Oaks, CA: Sage Publications; 1995.
8. Whyte SR, Kariuki PW. Malnutrition and gender relations in Western Kenya. *Health Transition Review*. 1991;1(2):1–16.
9. Semega-Janneh IJ. *Summary Report of a Survey on Infant Feeding Practices in The Gambia*. Banjul, The Gambia: Ministry of Health, Nutrition Unit; 1990.
10. Berman P, Kendall C, Bhattacharyya K. The household production of health: integrating social science perspectives on micro-level health determinants. *Social Science & Medicine*. 1994;38(2):205–215.
11. Bentley ME, Dee DL, Jensen JL. Breastfeeding among low income, African-American women: power, beliefs and decision making. Presented at: American Society for Nutritional Sciences Symposium. *Journal of Nutrition*. 2003;133:S305–S309.
12. Simon J, Rosen S, Claeson M, Breman A, Tulloch J. *The Family Health Cycle: From Concept to Implementation*. HNP Discussion Paper. Washington, DC: World Bank/International Bank for Reconstruction and Development; 2001.
13. Mosley WH. Child survival: research and policy. Child Survival: Strategies for Research. *Population Development Review*. 1984;110(Suppl 1):191–214.
14. White JM, Klein D. *Family Theories* (Second Edition). Thousand Oaks, CA: Sage Publications; 2002.
15. Turk DC, Kerns RD. *Health, Illness and Families: A Life-span Perspective*. New York, NY: John Wiley & Sons, Inc.; 1985.
16. Hartman A, Laird J. *Family-Centered Social Work Practice*. New York, NY: The Free Press; 1983.

17. Anderson RE, Carter I. *Human Behavior in the Social Environment: A Social Systems Approach* (Fourth Edition). New York, NY: Aldine de Gruyter; 1990.
18. Adepoju A, Mbugua W. Introduction. In: Adepoju A, ed. *La famille Africaine: Politiques démographiques et développement*. Paris, France: Karthala; 1999.
19. Makinwa-Adebusoye P. *Socio-cultural Factors Affecting Fertility in Sub-Saharan Africa*. New York, NY: United Nations Secretariat, Population Division, Department of Economic & Social Affairs; 2001.
20. McLeroy KR, Bibeau D, Steckler A, Glanz K. An ecological perspective on health promotion programs. *Health Education Quarterly*. 1988;15(4):351–377.
21. Breslow L. Social ecological strategies for promoting healthy lifestyles. *American Journal of Health Promotion*. 1996;19(4):253–257.
22. Mead M. *Culture & Commitment: A Study of the Generation Gap*. New York, NY: Natural History Press, Doubleday & Company; 1970.
23. Fuglesang A. *About Understanding: Ideas and Observations on Cross-cultural Understanding*. Uppsala, Sweden: Dag Hammarskjöld Foundation; 1982.
24. Treas J. Intergenerational Relationships and Development. In: Foote KA, Martin LG, eds. *Family and Development: Summary of Expert Meeting*. Washington, DC: National Academy Press; 1993.
25. Airihenibuwa CO. Of culture and multiverse: renouncing “the Universal Truth” in health. *Journal of Health Education*. 1999;30(5):267–273.
26. Chadha N. Understanding intergenerational relationships in India. *Intergenerational Relationships*. 2004;2(3/4):63.
27. Aubel J, Brasha E, Bejtja G, Kaba S, Islami E, Wolsey B, Mosier G, Peci A, Hoxha E, Mazari T, Meza G, Waltensperger K, Isara A. *The Grandmother Study: Devotion and Caring*. Tirana, Albania: Child Survival Project; 2004.
28. Bender DE, McCann MF. The influence of maternal intergenerational education on health behaviors of women in peri-urban Bolivia. *Social Science & Medicine*. 2000;50(9):1189–1196.
29. Piperata BA. Forty days and forty nights: a biocultural perspective on postpartum practices in the Amazon. *Social Science & Medicine*. 2008;67(7):1094–1103.
30. Ouoba MD. *Rôles des Grand-mères dans l’Education et la Perpétuations des Savoirs Locaux et Modernes en Matière de Santé/Nutrition et Bien-Être des Enfants et des Femmes. Rapport d’Etude*. Ouagadougou, Burkina Faso: Helen Keller International and Terre des Hommes; 2008.
31. Association pour la promotion de l’Alimentation Infantile au Burkina Faso(APAIB)/Women and Infant Nutrition Field Support Project (WINS). *Recherche Operationnelle sur les Pratiques Nutritionnelles du Couple Mere/Enfant dans la Province de Bazega*. Ouagadougou, Burkina Faso: APAIB/WINS and the United States Agency for International Development; 1995.

32. Jernigan HL, Jernigan MB. *Aging in Chinese Society*. New York, NY: Haworth Pastoral Press; 1992.
33. Sedó-Masis P, Ureña-Vargas M. Papel social de las abuelas en el seno familiar: Percepciones de un grupo de mujeres mayores residentes en comunidades urbanas de Costa Rica. *Red Latinoamericano de Gerontología*. 2007.
34. Aubel J, Ali MM, Abdou SI, Kamil FM, Moussa KM, Ali HA, et Habib O. *Femmes conseillères: actrices incontournables*. Une étude qualitative sur les rôles et influence dans la famille et la communauté sur l'alimentation du jeune enfant, de la femme enceinte et allaitante. 2007.
35. Davis P, Tagoe-Darko E, Mukuria A. *Water, Koko and Appetite: Complementary Feeding Practices in Kumasi, Ghana*. Calverton, MD: ORC Macro; 2003.
36. Apt NA. *Coping with Old Age in a Changing Africa: Social Change and the Elderly Ghanaian*. Brookfield, VT: Avebury Press; 1996.
37. Gryboski KL. Maternal and non-maternal time-allocation to infant care, and care during infant illness in rural Java, Indonesia. *Social Science & Medicine*. 1996;43(2):209–219.
38. Aubel J, Kuppens L, Sihalathavong D, Katthaoudone F. *Learning from the Community: The Grandmothers' Role*. Qualitative study on CDD and ARI. MCHI/World Health Organization; 1996.
39. Almroth S, Mohale M, Latham MC. Grandma ahead of her time: traditional ways of diarrhoea management in Lesotho. *Journal of Diarrhoeal Diseases Research*. 1997;15(3):167–172.
40. Waltensperger KZ. *Cultural Beliefs, Societal Attitudes and Household Practices Related to the Care of Newborns*. Lilongwe, Malawi: Save the Children; 2001.
41. Matinga PU. *Saving Newborn Lives Formative Study*. Lilongwe, Malawi: Save the Children; 2002.
42. Kaushal M, Aggarwal R, Singal A, Shunkla HM, Kapoor SK, Paul VK. Breastfeeding practices and health-seeking behavior for neonatal sickness in a rural community. *Journal of Tropical Pediatrics*. 2005;51(6):366–376.
43. Adams AM, Madhavan S, Simon D. Women's social networks and child survival in Mali. *Social Science & Medicine*. 2002;54(2):165–178.
44. Ag Erless M. *Grossesse et suivi de l'accouchement en milieu Toureg: Région de Kidal*. Mémoire du Diplôme de l'EHESS. Montpellier, France; 2007.
45. Waltensperger KZ. *Newborn Beliefs and Practices in Mali*. Consultancy Report. Bamako, Mali: Save the Children; 2001.
46. Castle ES. The Renegotiation of illness, diagnoses and responsibility for child death in rural Mali. *Medical Anthropology Quarterly*. 1994;8(3):314–335.
47. Aubel J, Kone D, Sangaré A. *Les cercles d'influence et la prise de décision: Une étude qualitative sur la préparation de la naissance et la sante néonatale*. Bamako, Mali: Helen Keller International; 2002.

48. Aubel J, Ould Yahya S, Diagana F, et Ould Isselmou S. *Le contexte socio-culturel de la malnutrition à Arafat, un milieu péri-urbain de Nouakchott: L'expérience et l'autorité dans la famille et la communauté*. Une étude rapide et qualitative. Nouakchott: World Vision; 2006.
49. Masvie H. The role of Tamang mothers-in-law in promoting breast feeding in Makwanpur District, Nepal. *Midwifery*. 2006;(22):23–31.
50. Ministry of Health (Nicaragua). *Conocer las conductas y practicas que aplican las mujeres y las familias en el cuidado del embarazo, parto y puerperio y del recién nacido. Dirección Primer Nivel De Atención*. Managua, Nicaragua: Ministerio de Salud; 2005.
51. Keith N, Kone M. (2007). *Etude sur les connaissances, attitudes, comportements et pratiques des communautés/populations vis-à-vis de la nutrition, des soins primaires de santé pour la femme enceinte et le nourrisson, l'accès à l'eau potable, l'hygiène et l'assainissement, l'accès aux soins de santé pour le jeune enfant dans la region de Maradi au Niger*. United Nations Children's Fund; 2007.
52. Medecins du Monde. *Alimentation et soins aux enfants: Pratiques, prises de decisions et facteurs de changement dans trios départements de la région de Tahoua*. Niamey, Niger; 2008.
53. Obikeze DS. Indigenous postpartum maternal and child health care practices among the Igbo of Nigeria. *Indigenous Knowledge Monitor*. 1997;5(2):1–7.
54. Davies-Adetugbo AA. Sociocultural factors and the promotion of exclusive breastfeeding in rural Yoruba communities of Osun State, Nigeria. *Social Science & Medicine*. 1997;45(11):113–125.
55. Mumtaz Z, Salway SM. (2007). Gender, pregnancy and the uptake of antenatal care services in Pakistan. *Sociology of Health & Illness*. 2007;29(1):1–26.
56. Niang CI. *Formative Research on Peri/Neonatal Health in the Kébémere Health District, Senegal*. Dakar, Senegal: Basic Support for Institutionalizing Child Survival; 2003.
57. Kane OL, Diallo A. *Etude sur les pratiques de soins du jeune enfant au Sénégal*. Dakar, Senegal: United Nations Children's Fund; 2004.
58. Food Security Analysis Unit. *Somali Knowledge, Attitude and Practices Study: Infant and Young Child Feeding and Health Seeking Practices*. Nairobi, Kenya: United Nations Food and Agriculture Organization; 2007.
59. Senanayake JP, Weerawarna H, Karunaratne KW, de Silva TU. Do babies need water in Sri Lanka? *Ceylon Medical Journal*. 1999;44(3):126–129.
60. Bedri NM, Lovel HJ. Grandmothers' Influences on Mother and Child Health in the Sudan [abstract]. *Trans Royal Society of Hygiene & Tropical Medicine*. 1993;87(3):340–341.
61. Aubel J, Muratova N, Bosorova N, Djelilova L, Allabergenova D, Shaymanov N, Kuchimov A. *The Role of the Grandmothers and Other Household Actors in Maternal and Child Health: A Qualitative Community Study*. Navoi, Uzbekistan; 2003.
62. Barrett JB. *Doctors, Clerics, Healers, and Neighbors: Religious Influences on Maternal and Child Health in Uzbekistan*. Dissertation. Austin, TX: University of Texas; 2008.

63. Mbugua W. Les Femmes et la Santé. In: Adepoju A, ed. *La famille Africaine: Politiques démographiques et développement*. Paris, France: Karthala; 1999.
64. Van Esterik P. Care, caregiving, and caregivers. *Food and Nutrition Bulletin*. 1995;16(4):378–388.
65. Kayongo-Male D, Onyango P. *The Sociology of the African Family*. London, United Kingdom: Longran; 1984.
66. Aubel J, Mhango K, Gondwe R, Munthali M, Hara A, Zimba E. “Custodians of Tradition.” *Promote Positive Changes for the Health of Newborns: Rapid Qualitative Assessment of Ekwendeni Agogo Strategy, Malawi*. Save the Children/Malawi and the Grandmother Project; 2006.
67. Aubel J, Mansour M. Qualitative community health research: a Tunisian example. *Health Policy & Planning*. 1989;4:244–256.
68. Aubel J, Diagne M, Touré I, Kalala L, Sene EH, Ndoeye M, Faye Y, et Tandia M. *Etude sur le rôle des grand-mères dans la santé et la nutrition de la mère et de l’enfant*. Mbour, Senegal: Christian Children’s Fund/ChildFund; 2000.
69. Aubel J, Touré I, Diagne M. Senegalese grandmothers improve maternal and child nutrition practices: “The guardians of tradition are not averse to change.” *Social Science & Medicine*. 2004;59(5):945–959.
70. McGadney-Douglass BF, Douglass R. Collective familial decision-making in times of trouble: intergenerational solidarity in Ghana. *Journal of Cross Cultural Gerontology*. 2008;23:147–160.
71. McGadney-Douglass BF, Douglass R, Apt NA, Antwi P. Ghanaian mothers helping adult daughters: the survival of malnourished grandchildren. *Journal of the Association for Research on Mothering*. 2008;7(2):112–124.
72. Fouts HN, Brookshire RA. Who feeds children? A child’s-eye-view of caregiver feeding patterns among the Aka foragers in Congo. *Social Science & Medicine*. 2009;69(2):285–292.
73. Choudhry UK. Traditional practices of women from India: pregnancy, childbirth, and newborn care. *Journal of Nursing*. 1997;26(5):533–539.
74. Bryant CA. The impact of kin, friend and neighbor networks on infant feeding practices: Cuban, Puerto Rican and Anglo families in Florida. *Social Science & Medicine*. 1982;15:1757–1765.
75. Lawn J, Cousens S, Zupan J. Four million neonatal deaths: when? Where? Why? *The Lancet*. 2005;365(9462):891–900.
76. De Paoli MM. Are infant feeding options that are recommended for mothers with HIV acceptable, feasible, affordable, sustainable and safe? Pregnant women’s perspectives. *Public Health Nutrition*. 2004;7(5):611–619.
77. Kesterton AJ, Cleland J. Neonatal care in rural Karnataka: healthy and harmful practices, the potential for change. *BMC Pregnancy and Childbirth*. 2009;9:20.

78. Bang AT, Bang RA, Reddy HM, Deshmukh MD. Methods and the baseline situation in the field trial of home-based neonatal care in Gadchiroli, India. *Journal of Perinatology*. 2005;25:S11–S17.
79. Ingstad B. *The Grandmother and Household Viability in Botswana: Family Planning, Childcare and Survival in Changing Tswana Society*. Working Paper: Labor & Population series for sub-Saharan Africa. Geneva, CH: International Labour Organization; 1994.
80. Engle P, Lhotska L. The role of care in programmatic actions for nutrition: designing programs involving care. *Food and Nutrition Bulletin*. 1991;20:121–135.
81. Mumtaz Z, Salway SM. Understanding gendered influences on women's reproductive health in Pakistan: Moving beyond the autonomy paradigm. *Social Science & Medicine*. 2009;68:1349–1356.
82. Scelza BA, Bird RB. Group structure and female cooperative networks in Australia's Western Desert. *Human Nature*. 2008;19(3):231–248.
83. Romo ME, Lopez DR, Lopez IB, Morales CL, Alonso KB. En la búsqueda de creencias alimentarias a inicios del siglo XXI. *Revista Chilena de Nutricion*. 2005;32(1):1–12.
84. Morse JM. The cultural context of infant feeding in Fiji. *Ecology of Food and Nutrition*. 1984;14:287–296.
85. Smith LC, Ramakrishnan U, Ndiaye A, Haddad L, Reynaldo M. *The Importance of Women's Status for Child Nutrition in Developing Countries*. Washington, DC: International Food Policy Research Institute; 2003.
86. Castle S, Yoder PS, Konaté MK. *Introducing Complementary Foods to Infants in Central Mali*. Calverton, MD: ORC Macro; 2001.
87. Ministry of Health/WELLSTART. *La Femme, son Travail et l'Alimentation du Jeune Enfant*. Dakar, Senegal: Ministry of Health; 1996.
88. Gryboski KL. *Infant Supplementary Feeding: Nutritional Context and Mothers' Sources of Knowledge*. Unpublished article; 1995.
89. Haider R, Kabir I, Hamadani JD, Habte D. Reasons for failure of breast-feeding counseling: mothers' perspectives in Bangladesh. *Bulletin of the World Health Organization*. 1997;75(3):191–196.
90. Basic Support for Institutionalizing Child Survival (BASICS)/LINKAGES Project. *Influences sur les Comportements Nutritionnels: Comparaison Entre les Enfants Bien Nourris et Mal Nourris avec la Méthodologie de la Déviance Positive et Négative*. Fianarantsoa, Madagascar: BASICS/LINKAGES; 1998.
91. Arby F. *L'Étude du Role des Grand-mères Sonrhail dans la Prise en Charge Socio-éducative des Femmes et des Enfants dans le Milieu Urbain. Mémoire de Fin d'Étude*. Bamako, Mali: INFTS; 2009.
92. Diarra D. *L'Étude du Role des Grand-mères Bambara dans la Prise en Charge Socio-éducative des Femmes et des Enfants dans le Milieu Urbain. Mémoire de Fin d'Étude*. Bamako, Mali: INFTS; 2009.

93. Perez-Gil-Romo SE, Reuda-Arroniz F, Diez Urdanivia-Coria S. Lactancia y ciudadana de los hijos: Estudio de casos en dos zonas rurales de Mexico. *Salud Publica Mexicana*. 1993;35(6):692–699.
94. Feireman S, Janzen JM. *The Social Basis of Health and Healing in Africa*. Berkeley, CA: University of California Press; 1992.
95. McKee L. Ethno-medical treatment of children's diarrheal illnesses in the highlands of Ecuador. *Social Science & Medicine*. 1987;25(10):1147–1155.
96. Finerman R. The forgotten healers: women as family healers in an Andean Indian community. In: McClain CS, ed. *Women as Healers: Cross-Cultural Perspectives*. New Brunswick, NJ: Rutgers University Press; 1989.
97. Negussie B. Health, nutrition and informal education of pre-school children in south-west Ethiopia. Paper presented at: International Conference on Early Education and Development, July 1989; Hong Kong.
98. Thuita FM. *Engaging Grandmothers and Men in Infant and Young Child Feeding and Maternal Nutrition*. United States Agency for International Development, Infant & Young Child Nutrition Project; 2010.
99. Bezner Kerr R, Dakishoni L, Shumba L, Msachi R, Chirwa M. “We grandmothers know plenty”: Breastfeeding, complementary feeding and the multifaceted role of grandmothers in Malawi. *Social Science & Medicine*. 2008;66:1095–1105.
100. Chmielarczyk V. Transcultural nursing: providing culturally congruent care to the Hausa of Northwest Africa. *Journal of Transcultural Nursing*. 1997;3(1):15–19.
101. Shaikh BT, Hatcher J. Health seeking behaviour and health service utilization in Pakistan: challenging the policy makers. *Journal of Public Health*. 2005;27(1):49–54.
102. Greene ME, Mehta M, Pulerwitz J, Wulf D, Bankole A, Singh S. *Involving Men in Reproductive Health: Contributions to Development*. Background paper to the report *Public Choices, Private Decisions: Sexual and Reproductive Health and the Millennium Development Goals*. United Nations Millennium Project; 2006.
103. Olaya G, Fonseca D. Relación entre el inicio temprano de la alimentación complementaria y la incidencia de diarrea y/o estreñimiento en niños menores de 4 meses. *Lecturas sobre Nutrición*. 2004;11(3):72–84.
104. Aubel J, Tukana D, Tui Odra M, Nand N, Fong M, Naidu K, Vatucawaga P. Collaborative research on breastfeeding in Fiji: narrowing the gap between research and practice. *Pacific Health Dialogue*. 1999;6(1):8–17.
105. Bixiones C. Breastfeeding Among Indigenous Guatemalan Mothers: A Study of the Barriers to Optimal Breastfeeding Practices. Dissertation. Chapel Hill, NC: University of North Carolina; 2007.
106. Jiménez MG, Méndez N. *Creencias y Hábitos Alimentarios Durante el Periodo de Embarazo y Lactancia de Mujeres de Aldeas del Departamento de Chiquimula, Guatemala*. Aceituno, Guatemala: Instituto Benson; 1996.

107. Wiley AS. Increasing use of prenatal care in Ladakh (India): the roles of ecological and cultural factors. *Social Science & Medicine*. 2002;55:1089–1102.
108. Toulmin C. *Cattle, Women and Wells: Managing Household Survival in the Sahel*. Oxford: Clarendon Press; 1992.
109. Kuteyi DV. Nutritional needs of the child especially in the first year of life. In: Baasher T, ed. *Traditional Practices Affecting the Health of Women and Children*. Alexandria: World Health Organization/Regional Office for the Eastern Mediterranean; 1982.
110. WELLSTART/United States Agency for International Development (USAID). *Exclusive Breastfeeding Promotion: A Summary of Findings from EBPs Applied Research Program 1992-96*. Washington, DC: USAID; 1996.
111. Niang CI, Thioune M, Kone N. *Représentations, Communication et Prise de Décision Concernant l'Utilisation des Méthodes Contraceptives au Senegal*. Dakar, Senegal: CEDPA/United States Agency for International Development; 2006.
112. Steuart GW. Social and cultural perspectives: community intervention and mental health. In: *Perspectives in Primary Prevention*, Proceedings of the Fourteenth Annual John W. Umstead Series of Distinguished Lectures. Raleigh, NC: North Carolina Division of Mental Health and Mental Retardation Services; 1978.
113. Ellis A. Intra-household Dynamics and Treatment Responses to Severe Febrile Illness in Children in Koulikoro Region, Mali. Thesis. Baltimore: Johns Hopkins University; 2008.
114. Ortega Hegg M, Centeno Orozco R, Castillo Venerio M. Masculinidad y factores socioculturales asociados al comportamiento de los hombres frente a la paternidad en Centroamérica. Managua: United Nations Population Fund/CEPAL; 2005.
115. Varkey LC, Mishra A, Das A, Ottolenghi E, Huntington D, Adamchak S, Khan ME, Homan F. *Involving Men in Maternity Care in India*. FRONTIERS final report. Washington, DC: Population Council; 2004.
116. United States Agency for International Development Infant & Young Child Nutrition Project. *Engaging Grandmothers and Men in Infant and Young Child Feeding and Maternal Nutrition: Report of a Formative Assessment in Eastern and Western Kenya*. Washington, DC: PATH; 2011.
117. Elders AJ. A cultural resource for sustainable development. In: *State of the World Report*. Washington, DC: World Watch Institute; 2010.
118. Sweetman C. Editorial. In: *Gender and Lifecycles*. Oxford, United Kingdom: OXFAM; 2000:1–8.
119. Welbourn A. Stepping Stones. United Kingdom: ActionAid; 1995. Available at: <http://www.actionaid.org/main.aspx?PageID=137>.
120. Barker G, Ricardo C, Nascimento M. Engaging men and boys in changing gender-based inequity in health: evidence from programme interventions. Geneva, CH: World Health Organization; 2007.

121. World Health Organization (WHO). Guidelines on HIV and infant feeding: principles and recommendations for infant feeding in the context of HIV and a summary of evidence. Geneva, CH: WHO; 2010.
122. Macharia CW, Kogi-Makau W, Muroki NM. Dietary intake, feeding and care practices of children in Kathonzwani Division, Makueni District, Kenya. *East African Medical Journal*. 2004;81(8).
123. Biratu BT, Lindstrom DP. The influence of husbands' approval on women's use of prenatal care: results from Yirgalem and Jimma towns, southwest Ethiopia. *Ethiopian Journal of Health & Development*. 2006;20(2):84–92.
124. Danforth EJ, Kruk ME, Rockers PC, Mbaruku G, Galea S. Household decision-making about delivery in health facilities: evidence from Tanzania. *Journal of Health, Population & Nutrition*. 2009;5:696–703.
125. Mbonye AK. Prevalence of childhood illnesses and care-seeking practices in rural Uganda. *The Scientific World Journal*. 2003;3:721–730.
126. Igbedioh SO. Infant weaning practises of some Idoma women in Makurdi, Nigeria. *Nutrition and Health*. 1995;10:239–253.
127. Nankunda J, Tylleskar T, Ndeezi G, Semiyaga N, Tumwine JK. Establishing individual peer counselling for exclusive breastfeeding in Uganda: implications for scaling-up. *Maternal and Child Nutrition*. 2010;6:53–66.
128. Theuring S, Mbezi P, Luvanda H, Jordan-Harder B, Kunz A, Harms G. Male involvement in PMTCT services in Mbeya Region, Tanzania. *AIDS Behavior*. 2009;13:S92–S102.
129. Moland KMI, de Paoli MM, Sellen DW, van Esterik P, Leshabari SC, Blystad A. Breastfeeding and HIV: experiences from a decade of prevention of postnatal HIV transmission in sub-Saharan Africa. *International Breastfeeding Journal*. 2010;5:10.
130. McCurdy S, Ross M, Williams M, Kilonzo G, Leshabari M. Heroin injection, needle sharing, and HIV infection in Dar es Salaam, Tanzania. Presented at Grand Rounds, Muhimbili University, Dar es Salaam, Tanzania; 2004.
131. Maru S, Datong P, Selleng D, Mang E, Inyang B, Ajene A, Guyit R, Charurat M, Abimiku A. Social determinants of mixed feeding behavior among HIV-infected mothers in Jos, Nigeria. *AIDS Care*. 2009;21(9):1114–1123.
132. Doherty T, Chopra M, Nkonki L, Jackson D, Persson L-A. A longitudinal qualitative study of infant-feeding decision making and practices among HIV-positive women in South Africa. *The Journal of Nutrition*. 2006;2421–2426.
133. Buskens I, Jaffe A, Mkhathshwa H. Infant feeding practices: realities and mindsets of mothers in southern Africa. *AIDS Care*. 2007;19(9):1101–1109.
134. Kasenga F. Making it happen: prevention of mother to child transmission of HIV in rural Malawi. *Global Health Action*. 2010;3:1882.
135. Desgréés-du-Lou A, Brou H, Djohan G, Becquet R, Ekouevi DK, Zanou B, Viho I, Allou G, Dabis F, Leroy V. Beneficial effects of offering prenatal HIV counseling and testing on

- developing a HIV preventive attitude among couples. *AIDS and Behavior*. 2009;13(2):348–355.
136. Bland RM, Rollins NC, Coutoudis A, Coovadia HM. Breastfeeding practices in an area of high HIV prevalence in rural South Africa. *Acta Paediatrica*. 2002;91(6):704–711.
 137. Kebaabetswe PM. Barriers to participation in the prevention of mother-to-child HIV transmission program in Gaborone, Botswana: a qualitative approach. *AIDS Care*. 2007;19(3):355–360.
 138. World Bank. UNAIDS Inter-Agency Task Team on PMTCT; 2010.
 139. Mbizvo MT, Bassett MT. Reproductive health and AIDS prevention in sub-Saharan Africa: the case for increased male participation. *Health Policy and Planning*. 1996;11(1):84–92.
 140. Aarnio P, Olsson P, Chimbi A, Kulmala T. Male involvement in antenatal HIV counseling and testing: exploring men's perceptions in rural Malawi. *AIDS Care*. 2009;21(12):1537–1546.
 141. Harrison P, Rowley J. The human right of family planning. In: *Human Numbers, Human Needs*. Suffolk, United Kingdom: International Planned Parenthood Federation; 1984.
 142. Auvinen J, Suominen T, Valimäki M. Male participation and prevention of human immunodeficiency virus (HIV) mother-to-child transmission in Africa. *Psychology, Health & Medicine*. 2010;15(3):288–313.
 143. Antelman G, Smith-Fawzi MC, Kaaya S, Mbwapo J, Msamanga GI, Hunter DJ, Fawzi WW. Predictors of HIV-1 serostatus disclosure: a prospective study among HIV-infected pregnant women in Dar es Salaam, Tanzania. *AIDS*. 2001;15(14):1865–1874.
 144. Njunga J, Blystad A. 'The divorce program': gendered experiences of HIV positive mothers enrolled in PMTCT programs—the case of rural Malawi. *International Breastfeeding Journal*. 2010;5:14.
 145. Katz DA, Kiarie JN, John-Stewart GC, Richardson BA, John FN, Farquhar C. Male perspectives on incorporating men into antenatal HIV counseling and testing. *PLoS ONE*. 2009;4(11).
 146. Blake M, Babalola S. Impact of a male motivation campaign on family planning ideation and practice in Guinea. Field Report No. 13. Baltimore: Johns Hopkins University Bloomberg School of Public Health, Center for Communication Programs; 2002.
 147. Solorzano I, Pulerwitz J, Pena R, Ellsberg M, Bank A. Positive impact of an HIV prevention communication for social change program on youth in Nicaragua. Presented at Global Health Council, May 30–June 2, 2006; Washington, DC. Available at: http://www.globalhealth.org/images/pdf/conf_2006/presentations/a1_pulerwitz.pdf.
 148. United States Agency for International Development. Technical Reference Materials on Nutrition. 2007.
 149. Save the Children. *State of the World's Mothers 2006: Saving the Lives of Mothers and Newborns*. Westport, CT: Save the Children; 2006.
 150. World Health Organization (WHO). *Community-Based Strategies for Breastfeeding Promotion and Support in Developing Countries*. Geneva, CH: WHO; 2003.

151. World Health Organization (WHO)/United Nations Children's Fund. *Global Strategy for Infant and Young Child Feeding*. Geneva, CH: WHO; 2003.
152. Hill Z, Kirkwood BR, Edmond K. *Family and Community Practices that Promote Child Survival, Growth and Development: A Review of the Evidence*. Geneva, CH: World Health Organization; 2004.
153. Haws R, Winch PJ, Castillo J. *Innovative Community-Based Interventions to Improve Newborn Health in Latin America and the Caribbean*. Child Survival Collaborations and Resources Group (CORE)/Johns Hopkins University; 2004.
154. Susin LRO, Giugliani ERJ, Kummer SC. Influence of grandmothers on breastfeeding practices. *Revista de Saúde Pública*. 2005;39(2).
155. Yajun Z, Yi L, Champagne S. Childrearing in Hubai Village, China. *Working Paper no. 25*. The Hague: Bernard Van Leer Foundation; 1999.
156. Alvarado BE, Tabares RE, Delisle H, Zunzunegui MV. Maternal beliefs, feeding practices and nutritional status in Afro-Columbian infants. *Archivos Latinoamericanos de Nutricion*. 2005;55(1):1–13.
157. Sear R, Mace R, McGregor IA. Maternal grandmothers improve nutritional status and survival of children in rural Gambia. *Proceedings of the Royal Society – Biological Sciences*. 2000;267:1641–1647.
158. Tawiah-Agyemang C, Kirkwood BB, Edmond K, Bazzano A, Hill Z. Early initiation of breast-feeding in Ghana: barriers and facilitators. *Journal of Perinatology*. 2008;28:S46–S52.
159. Barat L, Schubert J, Briggs J, Senauer K. *External Evaluation of the Pilot Phase of the Home-Based Management of Malaria Program in Rwanda*. USAID/BASICS/RPM Plus; 2007.

Appendix A. Summary of studies/research on the roles and influence of grandmothers and men in infant and young child feeding and health practices

Country and ethnic/cultural group	Urban or rural	Author, year, organization	Focus of study/ research	Key findings/conclusions/recommendations
Albania	Urban and rural	Aubel, 2004 ²⁷ (American National Red Cross)	Roles of family members in child health	<p>The mother-in-law is the 'general manager' in the household and assumes multiple roles, including supervising and educating her daughters-in-law and providing advice and assistance in all matters related to maternal and child health.</p> <p>Young women do not often make independent decisions regarding maternal and child health; their practices are influenced primarily by their mothers-in-law, with whom they are constantly collaborating on domestic, child care, and other activities.</p> <p>In all communities, grandmothers meet frequently and informally to share ideas and provide special support to each other (grandmother social support networks).</p> <p>During the first 40 days after birth, the woman and her baby are carefully watched and assisted. Grandmothers are the key advisors and supervisors.</p> <p>Husbands are primarily expected to provide financial resources for the family. They are not directly involved in maternal and child health care except when their special support is required for problems related to their wives or children.</p>
Bangladesh	Urban	Haider et al., 1997 ⁸⁹	Reasons for limited exclusive breastfeeding	<p>The main reason new mothers do not exclusively breastfeed is "domineering grandmothers" who believe many women have insufficient milk and who give other types of milk to infants. Grandmothers should be included in nutrition education along with women of reproductive age.</p>
Bolivia (Santa Cruz)	Peri-urban	Bender & McCann, 2000 ²⁸	Influence of maternal grandmothers on women's health practices	<p>Maternal grandmothers have considerable influence on practices of younger women during pregnancy and with newborns.</p>

Country and ethnic/cultural group	Urban or rural	Author, year, organization	Focus of study/ research	Key findings/conclusions/recommendations
Botswana (Tswana)	Rural	Ingstad, 1994 ⁷⁹	Grandmothers' role in family planning, child care, and child survival	Grandmothers are influential in household-level decision-making processes related to childhood and reproductive health, particularly in developing countries, so it is important to look beyond the couple. Grandmothers should be key figures in policymaking and projects to promote family planning and child welfare.
Brazil	Urban	Susin et al., 2005 ¹⁵⁴	Influence of grandmothers on breastfeeding practices	The advice of grandmothers has a strong and negative influence on breastfeeding duration and exclusivity. Mothers have very frequent contact with both maternal and paternal grandmothers. Grandmothers should be involved in health education programs given their strong influence on daughters-in-law.
Brazil (Amazon)	Rural	Piperata, 2008 ²⁹	Postpartum practices at the family level	During their first pregnancies, women benefit from the support and advice of experienced older women (mothers-in-law, mothers, and other female relatives); during subsequent pregnancies, they are able to replicate what they have learned. In almost all cases, women respect instructions from senior female advisors about foods to avoid that are believed to be harmful to mother and/or baby.
Burkina Faso (Gourman-tche, Mossi & Peul)	Rural	Ouoba, 2008 ³⁰ (HKI)	Role of grandmothers in child nutrition and health	Grandmothers, mainly mothers-in-law, play a multiplicity of roles related to promoting the well-being of young women and children, such as advising them on domestic activities, diet and care during pregnancy, delivery and newborn care, breastfeeding, and diagnosis and home treatment of sick children. Men provide food for the family and finance costs related to child illness and give permission for women's participation in antenatal care.
Burkina Faso		APAIB/WINS, 1995 ³¹	Role of mothers-in-law in child care	An earlier study in Burkina came to similar conclusions regarding the mother-in-law's status within the household as a recognized authority on child nutrition and health. Either maternal or paternal grandmothers teach first-time mothers about all aspects of child care, including breastfeeding.
Chile	Urban	Romo et al., 2005 ⁸³	Nutritional beliefs, taboos regarding pregnancy and newborns	The primary source of information for young women regarding nutrition during pregnancy and newborn care comes from experienced senior women, either within the family or through women's social networks.

APAIB: Association pour la promotion de l'Alimentation Infantile au Burkina Faso; **HKI:** Helen Keller International; **WINS:** Women and Infant Nutrition Field Support Project.

Country and ethnic/cultural group	Urban or rural	Author, year, organization	Focus of study/ research	Key findings/conclusions/recommendations
Chinese society (Singapore & Taiwan)	Urban	Jernigan & Jernigan, 1992 ³²	Role of elders in Chinese society	In Chinese culture, a central function of older women is caring for children; senior women provide an essential service to families through caregiving, strengthening and validating their own feelings of self-esteem.
China (Eastern)	Urban	Yajun et al., 1999 (Bernard Van Leer Foundation) ¹⁵⁵	Childrearing in China	Grandmothers play a crucial role, particularly paternal grandmothers, by providing child care for daughters-in-law working outside the home, though grandparents rarely reside with married children.
Colombia	Urban	Olaya & Fonseca, 2004 ¹⁰³ ; Alvarado et al., 2005 ¹⁵⁶	Complementary feeding and child feeding during diarrhea	Grandmothers continue to be involved and to exert considerable influence on young women's decision-making and nutritional practices with their children in urban settings, although some of their advice is beneficial and other advice is not.
Congo (Aka)	Rural	Fouts & Brookshire, 2009 ⁷²	Young child feeding by extended family members	In addition to mothers, multi-generational extended family members, including grandmothers (<i>kinship-sharing networks</i>) are actively involved in caregiving and feeding of young children, often spending more time feeding young children than their mothers. Both adult and elderly men are rarely involved in direct child feeding.
Costa Rica	Urban	Sedó-Masis & Ureña-Vargas, 2007 ³³	Role of grandmothers in child nutrition and well-being	Grandmothers' support to the household is aimed directly at grandchildren through caregiving, and indirectly at children's parents through the advice they provide.
Djibouti	Urban and peri-urban	Aubel et al., 2007 (UNICEF) ³⁴	Roles of household and community actors in infant and young child nutrition	In all three Djiboutian ethnic groups (Afar, Somali, and Arab), senior women are recognized for their extensive experience with pregnancy, care and feeding of young children, and caring for pregnant women. They serve as advisors to women of reproductive age, to other family members, and to neighboring women and families. Within the urban context, women who are pregnant or have young children, who do not have a senior female advisor within their own household, are systematically supported by other senior women in the neighborhood. Women do not act independently, and their practices are greatly influenced by the attitudes and advice of those around them, especially the women closest to them. Men have overall responsibility for the well-being of wives and children. They have little involvement in day-to-day issues related to nutrition/health of children and women, unless serious problems arise.

Country and ethnic/cultural group	Urban or rural	Author, year, organization	Focus of study/ research	Key findings/conclusions/recommendations
Ecuador (Saguaro)	Rural	Finerman, 1989 ⁹⁶	Senior women as family healers	Families are dependent on senior women as family health advisors and informal family healers.
Ecuador (Highlands)	Rural	McKee, 1987 ⁹⁵	Household treatment of child diarrhea	Senior women are primary medical specialists at the household level and transmit cultural knowledge from generation to generation by training younger women.
Ethiopia (southwest, Yirgalem, and Jimma)	Urban and rural	Biratu & Lindstrom, 2000 ¹²³	Men's attitudes toward antenatal care and their influence on women's use of services	Men's unsupportive attitudes toward antenatal care can be an obstacle for women. Men have more influence around antenatal care on women less than 20 years old than on older wives.
Ethiopia (Oromo)	Rural	Gibson & Mace, 2005	Impact of grandmothers on young child nutrition and survival	Grandmothers have a positive effect on young children's nutritional status and survival, especially maternal grandmothers. Grandmothers and other older female kin assume certain domestic tasks for younger mothers, giving them more time for child care-related activities and resulting in improved levels of child well-being.
Ethiopia (Central, Shewa region)	Rural	Negussie, 1989 ⁹⁷	Childbirth, maternal and child health, child care, and child feeding	Grandmothers are actively involved in teaching younger women about maternal health and childbirth, as well as caregiving, feeding of young children, treatment of illnesses, and socialization.
Fiji (Indigenous Fijian and Indo-Fijian groups)	Rural	Morse, 1984 ⁸⁴	Cultural context of infant feeding	In both ethnic groups, primary caregivers of infants are female relatives who collectively support women and their newborns. In both cultures, infant feeding patterns are strongly influenced by cultural norms passed on to younger women mainly by experienced elder women. There is no mention of men's roles.
Gambia	Rural	Semega-Janneh et al., 1990 ⁹	Beliefs and practices related to breastfeeding	Breastfeeding practices are influenced by women of reproductive age, grandmothers, grandfathers, and other men. Nutrition education should include all of these family members.
Gambia	Rural	Jallow, 1990	Infant feeding practices	Younger women's own mothers and husbands have more influence on their infant feeding practices than they do themselves.

UNICEF: United Nations Children's Fund.

Country and ethnic/cultural group	Urban or rural	Author, year, organization	Focus of study/ research	Key findings/conclusions/recommendations
Gambia	Rural	Sear et al., 2000 ¹⁵⁷	Influence of grandmothers on child nutritional status and survival	<p>During the first year of life, children living with paternal grandmothers were significantly taller and heavier than children without a paternal grandmother. During the second year of life, children living with maternal grandmothers have better nutritional status and less chance of dying.</p> <p>The presence of fathers or other male kin does not appear to improve the nutrition or survival of children.</p>
Ghana	Rural	Tawiah-Agyemang et al., 2008 ¹⁵⁸	Early initiation of breastfeeding	<p>Decision-making on initiation of breastfeeding and prelacteals is the responsibility of older women, mothers-in-law, traditional birth attendants, and other older female family members.</p> <p>Community programs should include women of reproductive age and older female relatives and traditional birth attendants.</p>
Ghana	Urban and rural	Apt, 1996 ³⁶	Role of elders in Africa	Grandmothers play a wide range of roles related to the care and nurturing of grandchildren, including providing and preparing food, providing child care, and caring for sick children. Younger women are dependent on older women for the emotional, advisory, and economic support that they provide.
Ghana (Ashanti)	Urban (Kumasi)	Davis et al., 2003 ³⁵ (ORC Macro, USAID)	Complementary feeding practices for children	<p>Maternal grandmothers (in a matrilineal society) are important sources of support, child care, and health information for mothers. Women who reside with their own mothers are more likely to have well-nourished children.</p> <p>Any interventions providing education on infant feeding and child care should include grandmothers as well as mothers.</p>
Ghana (Accra)	Urban	McGadney-Douglass & Douglass, 2008 ⁷¹	Household strategies to care for malnourished children	<p>Senior women coordinate household strategies for the care and recuperation of malnourished children.</p> <p>Decision-making related to sick children involves collective and intergenerational communication in which elder women play a leading role.</p> <p>Almost no fathers are involved in the treatment of their malnourished children.</p>

USAID: United States Agency for International Development.

Country and ethnic/cultural group	Urban or rural	Author, year, organization	Focus of study/ research	Key findings/conclusions/recommendations
Ghana (Brong-Ahafo)	Rural	Jansen, 2006	Decision-making around childbirth	Decisions related to childbirth are more often made by powerful older female relatives than by mothers themselves. Women are expected to follow strictly the advice of their older female relatives. Not doing so would be disrespectful. The role of men is to pay for antenatal and delivery costs, and later, for costs of children's health care.
Guatemala (Chuj & Akateco)	Rural	Bixiones, 2007 ¹⁰⁵	Nutritional practices with newborns	Both mothers-in-law and mothers of younger women play a leading role in advising and supporting new mothers on newborn breastfeeding and care. Men and other elders influence decision-making on various issues related to family well-being, but not infant feeding, which is the domain of senior women.
India (Karnataka)	Rural	Kesterton & Cleland, 2009 ⁷⁷	Barriers to appropriate newborn care	Grandmothers are key decision-makers regarding delivery and newborn care. During the 40-day confinement period of the mother and infant after birth, grandmothers ensure intensive oversight and teaching.
India (Bihar)	Rural	Harvey, 2003	Decision-making around child nutrition and health	Mothers-in-law have a strong influence in decision-making on all matters related to child nutrition and health.
India (Ladakh)	Rural	Wiley, 2002 ¹⁰⁷	Cultural factors related to pregnancy and childbirth	At critical times during pregnancy and childbirth, senior family and neighbor women play an authoritative role and greatly influence women's practices.
India (Gujarat)	Rural	Sharma & Kanani, 2004	Grandmothers' influence on child care and nutritional status	Grandmothers have a positive influence on younger women's childcare and infant feeding practices.
India (Andhra Pradesh)	Rural	Moestue & Huttly, 2008	Link between household educational levels and child nutritional status	Grandmothers' educational levels are positively associated with children's nutritional status.

Country and ethnic/cultural group	Urban or rural	Author, year, organization	Focus of study/ research	Key findings/conclusions/recommendations
India (Haryana)	Rural	Kaushal et al., 2005 ⁴²	Newborn feeding and care	Younger women usually put into practice advice received from their mothers-in-law related to infant feeding, including prelacteals and complementary feeding. They are unable to put into practice new knowledge on infant and complementary feeding from health workers if it goes against the advice of their mothers-in-law.
India (Sitapur)	Rural	CARE/India (USAID), Das & Nandan, Georgetown University, 2004	Reproductive health and family planning	Men stated that husband and wife decide jointly whether and what family planning method to use. However, in focus group discussions, most women stated that they decide to initiate use of a method but men almost always decide whether or not to have sex.
Indonesia (West Java)	Urban and rural	Gryboski, 1996 ³⁷	Mother's time and infant care	<p>Mothers-in-law are advisors and teachers of daughters-in-law, especially with first offspring. With subsequent children, grandmother teaching is less intensive.</p> <p>Younger mothers are reluctant to ignore their mother-in-law's advice, which implies breaking tradition and can create conflict.</p> <p>Mothers are primary caregivers and grandmothers are primary substitute caregivers.</p>
Kenya (Kathonzweni Makueni District)	Rural	Macharia et al., 2004 ¹²²	Childcare and feeding practices with children 6–59 months	Grandmothers are the main alternative caregivers after mothers.
Kenya (Western and Eastern Provinces)	Rural	Thuita, 2010 ⁹⁸	Grandmothers' and men's involvement in infant and young child and maternal nutrition	<p>Grandmothers hold a very powerful position within the extended family vis-à-vis both younger women and their husbands due to their widely respected expertise on maternal and child nutrition and health.</p> <p>Men's culturally defined role is to provide food for the family. They are not at all involved in direct care or nurturing of children before 2 years of age.</p> <p>Men give more weight to the counsel of their own mothers than to that of their wives.</p>

Country and ethnic/cultural group	Urban or rural	Author, year, organization	Focus of study/ research	Key findings/conclusions/recommendations
Kenya		Whyte & Kariuki, 1991 ⁸		<p>Policies and programs that narrowly target the mother-child dyad present serious limitations, especially in non-Western, collectivist societies where multi-generational and extended families influence household values and practices related to women and children.</p> <p>Nutrition interventions that ignore the social relationships in which women are enmeshed will not be successful, as they ignore the profound impact of these relationships on their nutrition and caregiving practices.</p> <p>Social context and social relationships need to be methodically taken into account in such interventions.</p>
Laos	Rural	Aubel et al., 1996 ³⁸	Household feeding and care of sick children	A grandmother's opinion regarding a child's illness is usually sought, and her advice is followed in most cases. Younger mothers rarely decide on their own how to deal with a sick child, given their easy access to and respect for their senior women advisors.
Lesotho (Sesotho)	Rural	Almroth et al., 1997 ³⁹	Home management of diarrhea	Grandmothers are authoritative advisors and decision-makers on all aspects of child care given their experience and status in the culture, playing an active role in caring for sick children and insisting adamantly on the importance of good nutrition for both sick and well children.
Madagascar	Rural	BASICS/ LINKAGES, 1998 ⁹⁰	Child health practices	In daily household child nutrition and health matters, grandmothers are a valuable family resource due to their experience, proximity, and availability.
Malawi	Rural	Bezner Kerr et al., 2007 ⁹⁹	Breastfeeding, complementary feeding, and role of grandmothers	<p>Many young women obey their mothers-in-law on child feeding, even when health workers have advised them differently, because of the powerful position held by mothers-in-law in the family.</p> <p>All family members consider that older women in the family are important sources of information in many areas of life, including childcare and feeding.</p> <p>Grandmothers are resentful that their traditional practices related to child nutrition and health are criticized by hospital staff.</p> <p>Health workers need to respect and understand grandmothers' experience and opinions if they hope to change certain of their harmful practices.</p>

BASICS: Basic Support for Institutionalizing Child Survival.

Country and ethnic/cultural group	Urban or rural	Author, year, organization	Focus of study/ research	Key findings/conclusions/recommendations
Malawi	Rural	Waltensperger, 2001 ⁴⁵	Cultural beliefs and newborn practices	In both matrilineal and patrilineal groups, younger mothers are advised and supervised by senior women, who help them master both cultural and family norms related to motherhood.
Malawi	Rural	Katchitsa, 1999	Infant feeding practices	The influence of senior women on infant feeding practices is due to their proximity and continuous advice to younger women. Many grandmothers lament the fact that younger women listen more to recommendations of health workers.
Malawi	Rural	Matinga, 2002 ⁴¹	Newborn care	Given their status as 'guardians of tradition', either maternal or paternal grandmothers actively teach new mothers culturally appropriate practices regarding newborn care during the <i>chilowero</i> period. Men play a critical role in child care by influencing their wives based on the influence of their own mothers and other senior women. Men frequently carry the title of 'head of household', and it is often assumed that they make all decisions regarding household matters. However, the literature reveals two factors in non-Western societies that have a significant influence on men's roles: first, gender-specificity in household roles; and second, the hierarchy of authority within households. In domains in which men are not extensively involved, they do not accumulate significant knowledge and consequently are not viewed as authoritative advisors to others. Men's knowledge of and involvement in maternal and child nutrition and health issues is generally limited compared to that of women. Men's involvement in pregnancy and newborn care is relatively limited. Senior women advise both husbands and wives about issues related to pregnancy and child care. The grandmother plays a major role because she is more knowledgeable about what takes place when a woman is pregnant than men. The role of the husband is to listen to what the grandmother suggests should be done.

Country and ethnic/cultural group	Urban or rural	Author, year, organization	Focus of study/ research	Key findings/conclusions/recommendations
Mali (Fulani & Humbebe)	Rural	Castle, 1994 ⁴⁶	Household management of child illness	Mothers-in-law play a central role in decision-making and practices related both to women during pregnancy and to infant and child feeding and care. Senior female household members have authority and superior status over younger females and expect younger women to defer to their opinions.
Mali (Fulani & Dogon)	Rural	Castle et al., 2001 ⁸⁶ (ORC Macro)	Complementary feeding	Mothers-in-law play a central role in decision-making and practices related both to women during pregnancy and to infant and child feeding and care.
Mali (Bambara)	Rural	Waltensperger, 2001 ⁴⁵ ; Aubel et al., 2002 ⁴⁷	Beliefs and practices around newborns	Mothers-in-law play a central role in decision-making and practices related both to women during pregnancy and to infant and child feeding and care.
Mali (Sonrhail & Bambara)	Urban	Arby, 2009 ⁹¹ ; Diarra, 2009 ⁹²	Role and influence of grandmothers in pregnancy and newborn care	Maternal and paternal mothers-in-law play multifaceted roles and have considerable influence on women of reproductive age.
Mali (Kidal & Touareg)	Urban and rural (nomadic)	Ag Erless, 2007 ⁴⁴	Pregnancy and care of newborns	Senior women play a coordinating role in the care of pregnant women and their newborns. In the traditional system of maternity leave, in the last month of pregnancy, women are expected to stay with their own mothers (maternal grandmothers) and remain there for at least 40 days after birth, secluded with and receiving advice and care from them.
Mali (Bambara)	Rural	Judi Aubel, 2003 (HKI)	Child health and nutrition	Grandmothers are the primary resource persons during pregnancy and labor, during the postpartum period, and with newborns. Grandmothers play a primordial role in household decision-making related to nutrition and health. Strategies need to be developed to strengthen the role of grandmothers as health promoters.

HKI: Helen Keller International.

Country and ethnic/cultural group	Urban or rural	Author, year, organization	Focus of study/ research	Key findings/conclusions/recommendations
Mali	Urban and rural	Adams et al., 2002 ⁴³	Importance of social networks on health and well-being	<p>In Mali, the characteristics and influence of social networks on the health and well-being of women and young children, and the role of senior women within these structures, in two different ethnic groups, reveals that members of younger women's social networks are overwhelmingly female and mostly family member.</p> <p>Four types of interrelated support is provided by social network members: (1) <i>practical support</i>, including help to younger women with child care and housework; (2) <i>cognitive support</i>, consisting of information and advice to promote health and well-being and to deal with illness; (3) <i>emotional or affective support</i>, including love, caring, empathy, and encouragement; and (4) <i>material support</i>, such as money, food, or other tangible assistance. Women's social networks provide access to a "wide range of resources that mothers mobilize to support the health and well-being of their children, both within and beyond the household."</p> <p>Relative to the World Health Organization's standards for maternal and child health, some of the advice given is beneficial, some not.</p> <p>Greater acknowledgement of the importance of <i>context</i> brings to light the limitations of the predominant orientation in maternal and child nutrition and health policies and programs that focuses narrowly on the mother-child dyad. Critiques of this narrow focus are increasingly heard, along with calls for both formative community analyses and interventions to give more attention to intra-household systems, of which children and women of various ages are a part.</p>
Mauritania (Nouakchott)	Peri-urban	Aubel et al., 2006 ⁴⁸ World Vision	Sociocultural context of malnutrition	<p>Sociocultural norms strongly influence the attitudes and practices of women of reproductive age relative to child nutrition and health. Grandmothers transmit cultural norms to them and supervise their practices.</p> <p>At the community level, the system of advice and support to women with children consists of grandmother advisors, social networks of grandmothers, and grandmother leaders.</p> <p>Men are involved in child nutrition and health to a limited extent. Their main responsibility is to ensure that older, experienced women are present to provide support to their wives.</p>

Country and ethnic/cultural group	Urban or rural	Author, year, organization	Focus of study/ research	Key findings/conclusions/recommendations
Mexico (Acapulco)	Urban	Quiros-Buelna et al., 2000	Child and adolescent nutrition	Grandmothers continue to play a significant role in the care and feeding of young children within the urban context.
Mexico	Rural	Perez-Gil-Romo et al., 1993 ⁹³	Grandmothers' role in feeding and care of young children with working mothers	Although the majority of women live in nuclear families, grandmothers are still very much involved in providing nutritional and other types of child care while younger mothers are working outside the home.
Nepal	Rural	Arnold et al., 2000	Early childhood	There is a hierarchy of power and decision-making in families based on gender and age. Mothers-in-law have considerable authority over decisions regarding daughters-in-law and grandchildren. Female family members have primary responsibility for child care. Male family members have only a limited role in child care.
Nepal (Kathmandu Valley)	Peri-urban	Aubel et al., 1999	Child nutrition	Grandmothers play multiple roles related to the nutrition and well-being of children and women (caring for grandchildren, kitchen gardening, caring for small animals, helping with housework, and giving advice on various family matters).
Nepal	Rural	Masvie, 2006 ⁴⁹	Maternal and child nutrition	Research activities that include a more systemic and in-depth analysis of both intra-household dynamics and the interactions and influences between women and other family and community resource persons and networks have consistently revealed the significant influence of senior women.
Nicaragua	Urban and rural	Nicaragua Ministry of Health, 2005 ⁵⁰	Maternal and child nutrition and health	Grandmothers advise pregnant women and new mothers on multiple aspects of maternal and child nutrition and health. Some of their advice is beneficial; some promotes harmful traditional practices.
Niger (multiple cultures)	Urban and rural	Keith & Kone, 2007 ⁵¹	Nutrition and health practices with women and children	In all cultures in Niger, grandmothers have an enormous influence on nutritional practices involving infants and young children. The man's role is to provide food for the family. Men are not involved in child feeding.
Niger (Hausa)	Rural (Tahoua)	Medecins du Monde, 2008 ⁵²	Young child feeding and care	Kinship ties explain why mothers-in-law assume such a dominant role in decision-making regarding feeding and care of their sons' children. A woman's children belong to her in-laws, rather than to her and her biological partner. Men are responsible for purchasing food for the family and buying medicine, but they are involved very little in day-to-day caring for either well or sick children.

Country and ethnic/cultural group	Urban or rural	Author, year, organization	Focus of study/research	Key findings/conclusions/recommendations
Niger (Hausa)	Urban and rural	Chmielarczyk, 1991 ¹⁰⁰	Care of sick children	<p>Within the extended family context, grandmothers play an active role in all aspects of child nutrition and health.</p> <p>During child illness, the grandmother assumes the role of primary caregiver due to her vast experience.</p>
Nigeria (Yoruba)	Rural (Osun State)	Davies-Adetugbo, 1997 ⁵⁴	Breastfeeding and complementary feeding	Immediately after birth, elder women are involved in caring for the newborn, administering water to the child, and discarding the colostrum.
Nigeria (Idoma)	Urban (Makurdi)	Igbedioh, 1995 ¹²⁶	Infant weaning practices	Men and health workers influence the decision to use formula as well as the introduction of complementary foods.
Nigeria (Igbo)		Obikeze, 1997 ⁵³	Indigenous postpartum and newborn care	The senior women in the family play a central role during the immediate postpartum period, initiating the new mother to newborn feeding and care.
Pakistan (Islamabad)	Urban	Iqbal, 1995	Breastfeeding	A woman's decision whether or not to breastfeed is strongly influenced by the mother-in-law's proximity and advice.
Philippines	Urban and rural	Doan & Popkin, 2003	Women's work and infant care	Grandmothers (either maternal or paternal) are the most frequent caregivers when mothers work outside the home.
Senegal (Wolof)	Urban and rural	Niang, 2003 ⁵⁶	Neonatal care	<p>During and after childbirth, psychological and spiritual support are provided to a woman by her social network, composed of elder women from within and outside the family.</p> <p>Men expect wives to follow their mother-in-law's instructions regarding newborn care. The mother-in-law is often the intermediary between a woman and her husband, even if she does not live with her son and daughter-in-law.</p>

Country and ethnic/cultural group	Urban or rural	Author, year, organization	Focus of study/ research	Key findings/conclusions/recommendations
Senegal	Rural	Aubel et al., 2000 ⁶⁸ (CCF Child Survival Project)	Role of grandmother networks in promoting child health	<p>Older, experienced women, or grandmothers, play a predominant role at the family level, both in health promotion and in illness management, serving as primary advisors on all health-related issues for both women of reproductive age and their husbands, supervising maternal and child health practices within the family, and directly caring for young children.</p> <p>Family members generally respect grandmothers and have confidence in them due to their age, vast experience, knowledge, and commitment to teach and care for the younger generations.</p> <p>Grandmothers should thus be viewed as partners and their role should be strengthened in all community health and nutrition programs.</p> <p>The role of grandmothers needs to be analyzed in initial assessments.</p>
Somalia and Somaliland	Rural	Food Security Analysis Unit, 2007 ⁵⁸	Infant and young child feeding practices	Maternal grandmothers have a decisive influence on their daughters' practices during pregnancy and with newborns, including orienting them to breastfeeding and motherhood in general.
South Africa, Swaziland, and Namibia	Urban, peri-urban, and rural	Buskens et al., 2007 ¹³³	Infant feeding practices	<p>Mothers mainly follow advice on infant feeding from their own mothers and other elder female relatives. Advice from health workers is usually not highly regarded.</p> <p>A woman's child does not belong only to her and her husband. The grandmothers (maternal and paternal) and other older family kin feel responsible and are collectively involved in child care and feeding.</p> <p>Fathers do not play a direct role in infant feeding decisions.</p>
Sri Lanka	Urban and rural	Senanayake et al., 1999 ⁵⁹	Breastfeeding	The majority of women who give birth in a hospital and are advised to exclusively breastfeed do not do so, choosing to follow alternative advice from their grandmothers and other senior women in the family.
Sudan	Rural	Bedri & Lovel, 1993 ⁶⁰	Influence of grandmothers on maternal and child health	Grandmothers provide advice and care to children and women throughout the life cycle.
Sudan (central)	Rural	Aubel et al., 1990	Influence of grandmothers on maternal and child health	Grandmothers play an active role in promoting child nutrition and health and advising on the care of sick children.

CCF: Christian Children's Fund.

Country and ethnic/cultural group	Urban or rural	Author, year, organization	Focus of study/ research	Key findings/conclusions/recommendations
Tanzania	Rural	Danforth et al., 2009 ¹²⁴	Household decision-making on choice of delivery site	<p>Women's opinions are more influential than men's in deciding place of delivery.</p> <p>Future studies should examine intra-household power and decision-making using qualitative methods.</p>
Tunisia (nationwide)	Urban and rural	Aubel & Mansour, 1989 ⁶⁷	Home treatment of diarrhea	<p>Although health facilities are generally quite accessible, grandmothers play a leading role in initial diagnoses, home treatment, and referral to specialists outside the home.</p>
Uganda	Rural	Mbonye, 2003 ¹²⁵	Care-seeking during childhood illnesses	<p>When children are ill, care-seeking is initiated at home.</p> <p>In addition to women, health education should target men and other members of the extended family.</p>
Uzbekistan (central)	Rural	Aubel et al., 2003 ⁶¹ (Project Hope)	Role of grandmothers and other household actors in maternal and child health	<p>Household strategies and practices related to maternal and child health and nutrition are primarily determined by senior women, even though younger women have regular contact with health providers.</p> <p>Grandmothers have wide-ranging influence within the family context due to a core value in Uzbek society: respect for the experience, knowledge, and advice of elders.</p> <p>Many practices proposed by grandmothers are beneficial; however, some are not optimal, particularly related to nutrition.</p> <p>Grandmother social networks constitute indigenous communication and support mechanisms that contribute to the health and well-being of children and women.</p> <p>Household strategies and practices related to maternal and child health and nutrition are primarily determined by women, but to a lesser extent by fathers and grandfathers.</p>
Uzbekistan	Urban and rural	Barrett, 2008 ⁶²	Influence of religion on maternal and child health	<p>In most cases, in both rural and urban areas, mothers-in-law reside with their sons and daughters-in-law and provide guidance on all aspects of maternal and child health and nutrition.</p> <p>Both cultural and religious values underpin the expectation that young women will follow the advice of their mothers-in-law.</p>

Appendix B. Programs involving grandmothers and/or men in child and maternal nutrition, family planning, reproductive health, and HIV/AIDS programs

Country	Organization, document, author, year	Focus of Project/program	Strategy for grandmothers and men	Results and recommendations regarding grandmothers and men
Albania	American Red Cross, implementation plan, 2004	Grandmother approach to family planning and child health	The strategy was to build capacity of maternity personnel to educate mothers and grandmothers about danger signs in newborns. Most men work abroad; mothers-in-law are in charge when they are away.	
Bangladesh	Population Council, 1997 Population Council, 2004	Male involvement in family planning and reproductive health	Men were involved in reproductive health services for spouses.	
Bolivia	AED LINKAGES, 2002-2003	Breastfeeding and complementary feeding		Fifty-seven percent of births are attended by a family member, usually the husband.
Cameroon	Plan USA, final evaluation, Dash, 2004	Child survival	Grandmothers are included in the target population for health education.	
Egypt (Alexandria)	Population Council, 1998	Male involvement in reproductive health	Strategies to involve men in reproductive health included training health care workers about inclusion of men, integrating services for men and couples into family planning clinics, intervening in communities to change attitudes toward male involvement, and raising awareness among policymakers.	Future research topics should include dynamics of husband-wife decision-making, men's perceptions of their own sexuality, and the feasibility and effectiveness of integrating services for men into existing reproductive health services.

AED: Academy for Educational Development.

Country	Organization, document, author, year	Focus of Project/program	Strategy for grandmothers and men	Results and recommendations regarding grandmothers and men
Ghana	AED LINKAGES, 2002-2003	Breastfeeding and complementary feeding	The behavior change communication/ community strategy on breastfeeding and complementary feeding (print materials, mass media, community events) included grandmothers and men. Training was provided for grandmothers and men on skills for communicating key messages on breastfeeding and complementary feeding.	
Honduras	Year 2 Implementation plan AED, Success Stories, Honduras Project, 1980-1983	Effective practices for diarrheal disease (Mass Media & Health Practices Project)	The primary audiences for mass media on proposed health practices were mothers with young children and grandmothers.	Significant improvements in behavior related to management of diarrhea resulted from disseminating health information. Grandmothers are not mentioned in the Success Stories document, even though they were a primary audience.
India	CARE, 2004	Family planning	The strategy attempted to increase couples communication and to overcome male resistance to family planning.	Communication within couples improved and increased interest in the Standard Day Method.
India	Population Council, 2004	Family planning, reproductive health, and maternal and child health	Because men are perceived to be primary decision-makers about women's health care but are poorly informed, the project intervened to increase men's involvement in their partners' maternal care, including increasing couples' knowledge about family planning and pregnancy and discussing contraception.	No recommendations. Men were found to be interested in participating in maternity care. Family planning use increased significantly at intervention sites.
India (Himalayas)	Interagency Gender Working Group, 2003 SIDH	Involving men in women's reproductive health	SIDH developed a non-formal educational curriculum for rural adolescents and young adults—Men's Partnership in Women's Reproductive Health—using an approach based on gender equity.	

SIDH: Society for Integrated Development of Himalayas.

Country	Organization, document, author, year	Focus of Project/program	Strategy for grandmothers and men	Results and recommendations regarding grandmothers and men
Malawi	Bezner Kerr et al., 2008 ⁹⁹	Role of grandmothers in breastfeeding and complementary feeding	Activities with grandmothers, men, and other community groups were based on an initial qualitative study that investigated roles of all key categories of household and community members.	
Malawi	SCF, Malawi & Grandmother Project, Aubel et al., 2006 ⁶⁶	Health of newborns		
Mali	<p>HKI, midterm evaluation, Sifri & Kone, 2002</p> <p>HKI, annual report, 2001</p> <p>HKI, final evaluation, Judi Aubel, 2003</p> <p>HKI, final evaluation, Judi Aubel, 2004</p> <p>HKI, midterm evaluation, Joseph, 2008</p>	Nutritional practices during pregnancy and with newborns	<p>A community strategy to promote changes in nutrition and child survival norms and practices involved training 'influential women', including both "experienced grandmothers" (<i>muso koroba</i>) and "dynamic women's group leaders" (<i>muso nyamogo</i>).</p> <p>The community strategy aimed to promote changes in community norms, and for that reason, it targeted senior women, male heads of household, traditional authorities, religious leaders, and traditional practitioners.</p> <p>Open-ended stories and songs were used to encourage grandmothers to consider incorporating new ideas into their age-old practices.</p> <p>Midwives in rural health facilities and traditional birth attendants were trained to increase collaboration and communication with grandmothers.</p> <p>In community meetings, key messages were disseminated to community members, especially men.</p>	<p>Contact and communication between midwives and grandmothers, who often accompany women to the health centers for their antenatal visits or for delivery, is essential for improved nutritional practices.</p> <p>Strengthening collaboration between health facilities and grandmothers is a key to the adoption of new nutritional practices at the household level.</p> <p>Women of reproductive age and younger men alike have stated that involving grandmothers very much facilitates adoption of new health-related practices by younger women.</p>

HKI: Helen Keller International; **SCF:** Save the Children Fund.

Country	Organization, document, author, year	Focus of Project/program	Strategy for grandmothers and men	Results and recommendations regarding grandmothers and men
Mexico	Interagency Gender Working Group, 2003 (with Salud y Género)	Involving men in Reproductive health	<p>Salud y Género aims to help women and men become more equal partners in reproduction and childrearing and to promote new models of fatherhood in the family.</p> <p>Salud y Género also works to reduce gender-based violence and improve men's support for women's reproductive health.</p> <p>The approach is based on education and communication for social change and on theories of Paulo Freire.</p>	
Mozambique	World Relief, final evaluation, Taylor, 2003 State of the World's Children, UNICEF, 2008	Child survival	<p>Care groups were established of mother volunteers, grandmothers, church leaders, and village health committee members.</p> <p>Special care groups were created for grandmothers to transmit behavior change communication messages to them, including verbal quizzes on their knowledge.</p> <p>Women were encouraged to mobilize men.</p>	<p>Special care groups for grandmothers were deemed unnecessary.</p> <p>Leaders and men's groups were mobilized by the women so the whole community was truly involved.</p>
Rwanda	BASICS, external evaluation, Barat & Schubert et al., 2007 ¹⁵⁹	Home-based malaria eradication	A behavior change communication campaign was developed (posters, radio, meetings, and community work).	<p>Grandmothers preferred posters and radio as information sources.</p> <p>Radio was consistently mentioned as an important information source for men.</p>

BASICS: Basic Support for Institutionalizing Child Survival; **UNICEF:** United Nations Children's Fund.

Country	Organization, document, author, year	Focus of Project/program	Strategy for grandmothers and men	Results and recommendations regarding grandmothers and men
Senegal	CCF, Child Survival Connections: Successes, Innovations and Promising Practices, 2002 CCF, final evaluation of the CANAH Project, Sall, 2006	Child survival and child health and nutrition	<p>A community strategy was developed based on a systems analysis of roles of grandmothers and other family actors and decision-makers.</p> <p>The project's communication strategy used traditional mechanisms of communication, such as women's solidarity circles, men's groups, and grandmother peer groups, and encouraged community members to combine traditional beliefs and values with 'modern' ideas on health/nutrition.</p> <p>An educational approach was developed using group sessions with grandmothers in each village to encourage them to integrate new ideas with traditional practices.</p> <p>Men were included in sessions with grandmothers to encourage and validate the grandmothers' role and experience.</p>	<p>In initial community assessments, the roles of grandmothers and other family and community actors needs to be analyzed, then their roles should be acknowledged and strengthened in interventions.</p> <p>Educational activities with grandmothers should be based on a problem-solving approach involving discussion of both traditional health-related practices and priority 'modern' child survival practices. One-way message dissemination approaches will not work with grandmothers.</p> <p>All project stakeholders emphatically acknowledged progress in terms of changes in knowledge and behavior related to health and nutrition, as well as in terms of the behavior changes on the part of women of reproductive age and grandmothers.</p> <p>Pre and post tests showed that involving grandmothers in nutrition education had very positive results. Grandmothers changed their views related to pregnant women's workload, women's nutritional intake during pregnancy, early initiation of breastfeeding, and exclusive breastfeeding.</p> <p>Younger women changed their practices based on grandmothers' advice; the involvement of grandmothers optimized behavior change in communities.</p>

CANAH: Community Action for Nutrition and Health; **CCF:** Christian Children's Fund.

Country	Organization, document, author, year	Focus of Project/program	Strategy for grandmothers and men	Results and recommendations regarding grandmothers and men
				<p>It is important to involve male community leaders in nutrition and health programs so that they can encourage grandmother involvement.</p> <p>Since men have gotten involved, many now offer their financial support for growth monitoring sessions, prenatal consultations, and cooking demonstrations. Some now bring their children to growth monitoring sessions.</p>
Senegal	Plan, final evaluation, Wilcox, 2002	Child survival	<p>Grandmothers were educated on healthy behavior through grandmother support groups.</p> <p>Village leaders were involved in educational activities on child health.</p>	<p>Virtually all mothers interviewed said they know about the advantages of exclusive breastfeeding. However, a constraint identified in the midterm evaluation was the opposition to the idea by some grandmothers/mothers-in-law. After the midterm evaluation, grandmother support groups were established. Since then, grandmothers have been involved in and supportive of 'modern' nutrition and health practices.</p> <p>Since older women have so much influence on health decisions in the home, related to women and children, grandmothers should always be involved in child survival activities.</p> <p>The active involvement of men in community strategies has strengthened involvement of male village leaders in health committees and activities.</p>

Country	Organization, document, author, year	Focus of Project/program	Strategy for grandmothers and men	Results and recommendations regarding grandmothers and men
South Africa	Population Council, 2004	Male involvement in reproductive health	The community strategy was to test the feasibility and impact of couples' counseling on reproductive health to increase knowledge around HIV/AIDS and other risky sexual behaviors.	Men and women expressed interest in male involvement in reproductive health, but the intervention had little impact because engaging male partners proved difficult and many male partners were unable to attend due to their work schedules. Communication among couples improved in the intervention group, but men's risk behavior remained unchanged.
Uzbekistan	Project Hope, final evaluation, Wilcox, 2007	Child survival and maternal health	The strategy to promote improved health practices focused on women leaders, mainly older women.	Due to their respect in the community, older women community leaders work very well with groups of mothers and grandmothers. The involvement of older women leaders had a positive impact on the health knowledge of women with children younger than 2 years and other women of reproductive age.
Uzbekistan	Counterpart (Rainbow of Life), final evaluation, Tobing, 2004	Child survival	Mothers and grandmothers (principally paternal grandmothers) were key target groups for behavior change communication as key caregivers, as were other critical decision-makers, husbands, and peers.	There were changes in grandmothers' practices (e.g., breastfeeding) due to their work with volunteer health workers and counselors. Mothers and grandmothers reported that they preferred the approach of volunteer health workers over the work of Ministry of Health workers because of better communication skills and better rapport.