

Review Article

The role and influence of grandmothers on child nutrition: culturally designated advisors and caregivers

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Improving the nutritional status of infants and young children in developing countries depends to a significant extent on adoption of optimal nutrition-related practices within the context of the household. Most policies, research and programmes on child nutrition in non-Western societies focus narrowly on the mother–child dyad and fail to consider the wider household and community environments in which other actors, hierarchical patterns of authority and informal communication networks operate and influence such practices. In particular, the role and influence of senior women, or *grandmothers*, has received limited attention. Research dealing with child nutrition from numerous socio-cultural settings in Africa, Asia and Latin America reveals three common patterns related to the social dynamics and decision-making within households and communities. First, grandmothers play a central role as *advisers* to younger women and as *caregivers* of both women and children on nutrition and health issues. Second, grandmother social networks exercise collective influence on maternal and child nutrition-related practices, specifically regarding pregnancy, feeding and care of infants, young children and sick children. Third, men play a relatively limited role in day-to-day child nutrition within family systems. The research reviewed supports the need to re-conceptualize the parameters considered in nutritional policies and programmes by expanding the focus beyond the mother–child dyad to include grandmothers given their role as culturally designated advisers and caregivers.

Keywords: grandmothers, caregivers, child nutrition, community health, culture, family systems

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Introduction

In the international nutrition and health arena, there is increasing realization that the adoption of optimal practices related to maternal and child nutrition and health depends to a great extent on decision-making and influences within the context of the family or household (Simon *et al.* 2001). In non-Western societies where most women and young children are embedded in extended and multigenerational family

systems, older, more experienced women play an active role transmitting socio-cultural norms and influencing nutrition and health practices of the mother–child dyad. In the public health literature, there is considerable discussion of the need to adopt an ecological and systems perspective on community nutrition and health issues (Stokols 1996) and in this vein, to consider not only *mothers* but also *other caregivers* involved in child nutrition and health within the family and community environments. In all

cultures, grandmothers¹ are present and act as both advisors and caregivers. Surprisingly, public health discussions dealing with maternal and child nutrition and health within the family context have paid only limited attention to the role of senior women or *grandmothers*.

The purpose of this paper is to review research findings from across the non-Western world on the role and influence of grandmothers related to nutritional practices and care of women during pregnancy and of infants and young children related to breastfeeding, complementary feeding and feeding of sick children. Studies were reviewed from both published and grey literatures from 60 different cultural contexts in 35 countries in Africa, Asia and Latin America to identify common patterns related to grandmothers' involvement in and influence on nutrition-related practices within families and the wider community context.

Background

There is a broad consensus among international nutrition and health authorities regarding a number of evidence-based practices that contribute to improving the nutrition and health of young children and mothers (World Health Organization, WHO 2004). Also, there is increasing realization that the

¹In this paper, the term *grandmother* is used broadly to refer to all senior women who have experience and who are involved in providing support and care for children and their mothers. The term does not only apply to maternal and paternal grandmothers and can include aunts, elder co-wives and other senior women within the family system.

widespread adoption of these optimal practices related to maternal nutrition during pregnancy and to infant and young child nutrition associated with breastfeeding, complementary feeding and feeding during childhood illnesses, depends primarily on decision-making and behaviours at the family, or household, level (Acharya *et al.* 2004).

While extensive resources have been devoted to identifying efficacious nutrition-related practices with children and women, relatively limited investment has been made to understand the intra-household context into which such 'improved practices' are introduced, including the roles and existing strategies of household actors to promote children's and women's health and well-being (Berman *et al.* 1994).

Most research on child nutrition in non-Western societies has focused on the mother-child dyad and has not investigated the wider household and community environments in which other actors, hierarchical patterns of authority, and informal communication networks influence nutrition practices (Pelto 2008). In particular, the role and influence of senior women, or *grandmothers*, has received limited attention in formative research as well as in subsequent design of interventions.

In the mid-1990s, Berman *et al.* (1994) critiqued the predominant orientation in international public health, which focuses on identifying technical solutions to priority health problems while giving limited attention to analysis of household settings wherein choices are made regarding the use of available resources and of 'traditional' and 'modern' practices. These authors proposed the 'household production of health' (HPH) framework, grounded on the premise that determinants of health behaviour and ultimately

Key messages

- Research from Africa, Asia and Latin America reveals the central role of senior women, or grandmothers, in non-Western societies as advisors to younger women and as caregivers of women and children, specifically related to the nutrition/health of pregnant and breastfeeding women and young children.
- Formative research in non-Western, collectivist societies should be re-conceptualized to adopt an ecological, or systems, approach to provide more comprehensive information on the family/household settings in which women and children are embedded and of which grandmothers are invariably a part.
- International nutrition/health policies and programmes should give greater attention to the influential role of grandmothers and view them as a resource rather than an obstacle.

of health status emanate primarily from within households and not from within health services as sometimes assumed.

Early advocates of the HPH concept asserted that the design of community interventions should be grounded in a comprehensive understanding of intra-household roles, interaction and decision-making. The HPH orientation reflects an *ecological perspective* that draws on earlier work in human development (Bronfenbrenner 1979), in community development (Archer *et al.* 1987) and in public health (Brody & Sobel 1981; Milio 1988).

Since the mid-1990s, the HPH and ecological perspectives remained marginalized concepts within international public health research and programming. In 2001, in a World Bank working paper, Simon and colleagues reiterate the concept of HPH (Simon *et al.* 2001). They argue that ‘producing health – whether for a child, a mother or anyone else – is primarily the task of a family system’ (p. 4). Following this line of reasoning, others have articulated the need for a systemic, or *social ecological*, view of intra-household roles and dynamics as a basis for design of community health interventions (McLeroy *et al.* 1988; Breslow 1996; Stokols 1996; Bentley *et al.* 2003). The social ecological approach offers a ‘theoretical framework for understanding the dynamic interplay among persons, groups, and their socio-physical milieus’ (Stokols 1996, p. 283). From this perspective, nutritional anthropologist Bentley *et al.* (2003) posits that nutritional strategies must take into account the multiple levels, or *spheres of influences*, within and around families that affect nutritional attitudes and practices related to women and children.

In more recent years, there has been increasing discussion in the international health arena of the need for a systemic perspective on family and community contexts in which women and children are embedded (Glass & McAtee 2006). Resonating with the HPH perspective, these authors maintain that the development of more effective public health programmes requires more comprehensive understanding of ‘the social context in which health behaviors occur and become socially patterned’ (p. 1651).

Greater acknowledgement of the importance of *context* brings to light the limitations of the predomi-

nant orientation in maternal and child nutrition and health policies and programmes that focuses narrowly on the woman–child dyad (Parashar 2005; Moestue & Huttly 2008). Growing criticism of this narrow focus is increasingly heard as are calls for formative research that gives more attention to intra-household systems in which children and women, of various ages, are embedded (Whyte & Kariuki 1991; Adams *et al.* 2002; Levinson *et al.* 2002; Molyneux *et al.* 2002; Wiley 2002; Ellis 2008; Kamat 2008; Moestue & Huttly 2008; McGadney-Douglass & Douglass 2008; Peltó 2008).

For many years, the prevailing orientation in community nutrition programmes has embodied a narrow focus on women of reproductive age (WRA) (Peltó 2008). In recent years, in the international public health/nutrition literature, there has been increasing reference, however, to the role of *other caretakers*, in addition to *mothers*, though only marginal attention has been paid to the role of senior women, or *grandmothers*. In an earlier review (Aubel 2005), evidence is presented on grandmothers’ advisory and caregiving roles related broadly to child development across African, Asian and Latin American cultures. This paper discusses research findings from non-Western societies dealing specifically with the role and influence of grandmothers on infant and child nutrition practices.

Conceptual grounding for this discussion

As a backdrop to the discussion of research on the role and influence of grandmothers in Africa, Asia and Latin America, three facets of non-Western societies are important to consider, namely, *family systems*, *cultural systems* and *hierarchy and the role of elders*.

Family systems

In all cultures, families constitute a central social institution and a support mechanism for women and children. *Family systems theory* (White & Klein 2002) identifies various parameters that provide insight into household dynamics and influence related to child nutrition, namely the following: the significant influ-

ence of the family environment on women and children; complementary roles of family members; interaction and collective decision-making; and hierarchical relationships between household members. Specifically, in non-Western societies, attitudes and practices related to women and children's nutrition and health are influenced by multiple members of extended and multigenerational families (McGadney-Douglass & Douglass 2008; Pelto 2008) as well as by gender-specific roles, age and experience of household members (Adepoju 1999; Makinwa-Adebusoye 2001). Most nutrition and health policies and programmes in non-Western,² collectivist societies, however, narrowly target the mother-child dyad based on a reductionist and risk approach and fail to give sufficient attention to the multifaceted family systems of which they are a part (Mosley 1984). In Western Kenya, for example, Whyte & Kariuki (1991) critique reductionist nutrition interventions that 'treat women as individual actors' and ignore the fact that 'women see themselves as enmeshed in social relationships' (p. 1) that profoundly affect their nutrition and care giving practices.

Cultural systems

The households in which women and children are embedded are also influenced by the cultural systems of which families are a part. Cultural systems have far-reaching influence on nutrition and health practices but many nutrition and health programmes simplistically equate *culture* with community *beliefs and practices*, ignoring the social structures and actors,

²This paper deals with 'non-Western' societies. The categorization of 'Western' and 'non-Western' societies can be defined in various ways. In this discussion, reference to the 'non-western world' includes Africa, Asia, Latin America and the Pacific, while the 'Western world' includes European, North American and other parts of the world that are predominantly inhabited by people of European origin. The use of these terms and categories refer to broad differences between Western patterns of social organization, Judeo-Christian and individualist values, rooted in European history and culture, which contrast significantly with the patterns of social organization and interaction and collectivist values that are more prevalent in the non-Western world.

decisive manifestations of culture. Pepitone's (1981) comprehensive notion of cultural systems consists of two interrelated components: first, *social structures* and *organizations* related to family, kinship, roles, relationships, hierarchies and communication nets; and second, *normative systems* of values and beliefs that affect practices or behaviour. Many maternal and child nutrition programmes give limited attention to the cultural systems into which programme interventions are introduced (Pelto 1987; Airhihenbuwa 1995).

Hierarchy and the role of elders

Another critical facet of most non-Western societies is the role of elders as advisors to younger generations, along with the importance of hierarchy and of respect for age and experience. Fuglesang (1982) equated the vital role elders play in these societies with the function of the hard drive in a computer. In international public health programmes, the role of elders in general, and specifically of elder women, is given little attention. In addition, a series of negative stereotypes regarding senior women, often articulated by health sector staff and international donors (Aubel *et al.* 2004b), indubitably contribute to the gap between their significant role in family and cultural systems and their relative absence from child nutrition and health programmes.

In many cases, discussions of maternal and child nutrition policies and programmes give no attention to these three concepts, which are all fundamental to non-Western societies.

Source of research discussed

This paper reviewed research in English, French and Spanish published between 1995 and 2010 in key journals and books on international public health and development topics and also from 'grey' sources, composed primarily of unpublished studies, produced by non-governmental organizations (NGOs), international development organizations and universities. The rationale for inclusion of unpublished studies is the paucity of published works on the role and influence of grandmothers in child nutrition. The grey

literature was collected during programmatic visits to NGOs and other international development organizations in Africa, Asia and Latin America. Approximately half of the studies reviewed are grey literature from such institutions. Between published and grey sources, studies from more than 60 cultural contexts in 35 different countries in Africa, Asia and Latin America were identified from a broad range of fields including anthropology, nursing and public health. In studies reported on from around the world, the issue of grandmother involvement has rarely been a priority research focus. In most cases, information collected on the role of grandmothers was incidental to the explicate purpose of the studies that investigated various topics on the health and well-being of women and children. The majority of the research discussed here is based on qualitative investigations. The purpose of this article is to analyse findings from a wide array of socio-cultural contexts and to identify common themes across cultures.

Cross-cutting roles in child nutrition

Research reviewed from a wide gamut of non-Western cultural contexts revealed three cross-cutting and interrelated themes: the central role of grandmothers as advisors of younger women and as caregivers of women and children; the collective influence of grandmother social networks on the practices of mothers and young children; and the relatively limited involvement of men in child and maternal nutrition within family systems.

The central role of grandmothers as household advisors and caregivers

Research reviewed from numerous contexts reveals that in all societies, 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 childhood illness. Across cultures, *indigenous support systems* for women are a key feature within which a central role is played by experienced senior women both as advisors to younger women and as caregivers of children and women. Evidence of this

role is found in studies from Niger (Keith & Kone 2007; Medecins du Monde 2008), Kenya (Whyte & Kariuki 1991), Mauritania (Aubel *et al.* 2006), Senegal (Niang 2003; Kane & Diallo 2004), Mali (Castle 1994; Waltensperger 2001a; Aubel *et al.* 2002; Ag Erless 2007), Brazil (Piperata 2008), Uzbekistan (Aubel *et al.* 2003; Barrett 2008), Albania (Aubel *et al.* 2004a), Djibouti (Aubel *et al.* 2007), Malawi (Waltensperger 2001b; Matinga 2002), India (Kaushal *et al.* 2005), Laos (Aubel *et al.* 1996), Lesotho (Almroth *et al.* 2000) Nigeria (Davies-Adetugbo 1997; Obikeze 1997), Ghana (Apt 1996; Davis *et al.* 2003), Sri Lanka (Senanayake *et al.* 1999), Indonesia (Gryboski 1996), Nepal (Masvie 2006), Bolivia (Bender & McCann 2000), Nicaragua (MOH/Nicaragua 2005), Sudan (Bedri & Lovel 1993), Burkina Faso [Association pour la promotion de l'alimentation infantile Burkinabe/Women and Infant Nutrition (APAIB/WINS) 1995; Ouoba 2008], Pakistan (Mumtaz & Salway (2007) and Somalia [Food Security and Nutrition Analysis Unit (FSAU) 2007].

The core advisory and caregiving roles of grandmothers identified across cultures are quite similar and relate to multiple facets of infant and child nutrition, namely breastfeeding initiation and methods, colostrum, prelacteals, feeding during illnesses, complementary foods and timing of the introduction thereof and the diet of pregnant and breastfeeding mothers.

Many studies reviewed clearly show that during the critical neonatal period, grandmothers' culturally designated role is accentuated insofar as it is viewed as both a precarious and a formative moment. Anthropologist Piperata (2008) affirms the universal reality that 'childbirth and the immediate postpartum period are events of great biological and social importance in our species' (p. 1094). From a biomedical perspective, the post-partum period is viewed as critical to the well-being and survival of both children and women. From the culturally grounded perspective of non-Western societies, this period is viewed as decisive but for somewhat different reasons. First, in all societies, it is realized that during the first weeks of life, there are various threats to the health and survival of newborns. Second, as first-time mothers, young women are expected to internalize socio-culturally prescribed

practices related to pregnancy, childbirth and child care, with support from experienced persons. Evidence across socio-cultural contexts shows that in all cases, more experienced senior women are charged with coordinating the required training and support to women and children in response to these two sets of concerns.

An additional factor that contributes to young mothers' need for guidance during first-time motherhood is the fact that most women across the developing world are quite young when they have their first offspring. The average age at which women marry for the first time is 17.1 in South Asia, 17.3 in Africa and 18.8 in Latin America (Smith *et al.* 2003). A universal reality is that first-time mothers are relatively inexperienced. Although some may have spent years caring for younger siblings, they still need to learn mothering skills from more knowledgeable persons, and very young mothers need even more support and encouragement from those with experience and in whom they have confidence.

Inculcating cultural traditions

Anthropologist Van Esterik (1995) argues that the acquisition of culturally accepted caregiving attitudes and practices by young mothers with newborns and young children largely depends on the caregiving that women themselves receive from more experienced persons, invariably older women. She points out that conceptual and programmatic frameworks addressing child feeding and care invariably focus on the caregiving provided to children by their mothers while failing to consider the caregiving provided to new mothers. She posits that this generally neglected factor may be a key underlying determinant of child survival.

The literature reviewed from numerous cultural 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 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' (Castle *et al.* 2001, p. 56).

In Senegal, dependency of novice mothers on more experienced women is noted, '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' (MOH/WELLSTART 1996, p. 64). In Burkina Faso, both maternal and paternal grandmothers teach first-time mothers about all aspects of child care, including breastfeeding (APAIB/WINS 1995). In Malawi, given their status as 'guardians of tradition', both maternal and paternal grandmothers actively coach new mothers on culturally appropriate practices regarding newborn care (Matinga 2002). In Java, anthropologist K. Gryboski (unpublished data), describes the intensive involvement of grandmothers as *advisors and trainers* of young daughters-in-law when they have their first offspring, 'Young mothers are reluctant to ignore the advice of their elders, to break tradition and thereby create conflict' (p. 2). During subsequent pregnancies, the trainers' involvement decreases as their confidence in younger women's mastery of prescribed attitudes and skills increases. Mumtaz & Salway (2007) report similar trends in Pakistan regarding the responsibility of older women related to maternal and child health matters. 'Older women are considered *siyarni* (wise and experienced) and are vested with the authority to make decisions that are binding. All of her (younger woman's) healthcare needs are her mother-in-law's responsibility . . . and her decision is usually final' (p. 9).

Numerous other studies provide evidence of the intensive teaching and follow-up provided by senior women, especially with primigravida women before and after delivery, in Niger (Keith & Kone 2007), Kenya (Whyte & Kariuki 1991), Mauritania (Aubel *et al.* 2006), Senegal (Niang 2003), Burkina Faso (Ouoba 2008), Mali (Ag Erless 2007; Waltensperger 2001a), Brazil (Piperata 2008), Uzbekistan (Aubel *et al.* 2003; Barrett 2008), Albania (Aubel *et al.* 2004a), Djibouti (Aubel *et al.* 2007), Malawi (Waltensperger 2001b), India (Kaushal *et al.* 2005) and Laos (Aubel *et al.* 1996).

Maternal and child nutrition and health research and programming at both national and international levels have given limited attention to these culturally

determined family-level strategies that provide care and training to young mothers, and they have generally ignored the leadership role played by senior women in these strategies.

Coordination of newborn care

The past several years has seen increased focus in the international public health sphere on the neonatal period of child development (Lawn *et al.* 2005) in light of high neonatal mortality rates in many countries. The research reviewed supports the conclusion that all cultures perceive the early days and weeks of an infant's life as decisive and all take special measures to ensure newborn protection, feeding and care in keeping with cultural standards. The studies reviewed support the conclusion that across cultures, responsibility for oversight of infants and mothers during the post-partum period is conferred upon the senior women, who are usually family members. There is evidence of this pattern from Nigeria (Davies-Adetugbo 1997; Obikeze 1997), Ghana (Apt 1996; Davis *et al.* 2003), Djibouti (Aubel *et al.* 2007), Malawi (Waltensperger 2001b), Mauritania (Aubel *et al.* 2006), Mali (Castle 1994; Waltensperger 2001a; Aubel *et al.* 2002; Ag Erless 2007), Sri Lanka (Senanayake *et al.* 1999), Indonesia (Gryboski 1996), Nepal (Masvie 2006), Bolivia (Bender & McCann 2000), Nicaragua (MOH/Nicaragua 2005), Sudan (Bedri & Lovel 1993), Niger, (Medecins du Monde 2008), Somalia (FSAU 2007) and Senegal (Niang 2003; Kane & Diallo 2004).

In many socio-cultural contexts, concern for the well-being of newborns is manifested through a period of protected seclusion of newborns and mothers in the home after birth. Although often 40 days, this period can vary from a few days to several months: Malawi (Waltensperger 2001b), Matinga 2002), Tanzania (De Paoli 2004), Nigeria (Obikeze 1997), Uzbekistan (Barrett 2008), India (Bang *et al.* 2005), Laos (Aubel *et al.* 1996), Mali (Ag Erless 2007), Burkina Faso (Ouoba 2008), Bolivia (Bender & McCann 2000) and Botswana (Ingstad 1994). The period of seclusion from the outside world allows both for recuperation by and coaching of the mother as well as intensive monitoring and care of the newborn by senior women advisors.

In Malawi, post-partum care is provided to women and newborns during the *chilowero* period (Matinga 2002). In rural Tanzania, a 3-month traditional 'maternity leave' is under the direction of the mother-in-law (De Paoli 2004). In Igbo culture in Nigeria, Obikeze (1997) describes indigenous post-partum care, or *omugwo*, as a unique opportunity for young mothers to learn from senior women. 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 mothers-in-law. Participation of grandmothers in *omugwo* provides older women with a new and highly-valued role within the family and society (and) this contributes to their self-esteem, reputation and general well-being (p. 3). In Uzbekistan, during the 40-day *chilla* period, the new mother and child are secluded, in most cases, with the paternal grandmother (Barrett 2008). Throughout this period, it is the grandmother's obligation to provide information and assistance in the first stage of her grandchild's life (p. 216) and the younger woman's responsibility to learn from her senior advisor how to care for her newborn following family and cultural traditions. In Maharashtra, India, after birth, there is an initial period of isolation of newborns for 7–12 days during which only the mother, grandmother and traditional birth attendant can touch the baby (Bang *et al.* 2005). As in many other cultures, it is believed that newborns are susceptible to the evil eye and that isolation provides protection. During the period of seclusion, either the paternal or maternal grandmother demonstrates how to bathe, massage and feed the baby. In most cases, grandmothers advise not to give colostrum, to give sugar water for several days and to initiate breastfeeding after three days.

Various other studies reviewed also document the intensified advisory and caring roles of grandmothers during periods of neonate and childhood illness related to nutritional as well as other aspects of home treatment from Mali (Ag Erless 2007), Ghana (Apt 1996; McGadney-Douglass *et al.* 2008), Niger (Chmielarczyk 1991), Tunisia (Aubel & Mansour 1989), Pakistan (Shaikh & Hatcher 2004) and India (Kaushal *et al.* 2005).

Pioneering conceptual work *on care and care giving* related to child nutrition and health was done by

Engle in the early 1990s (Engle & Lhotska 1991). She called attention to this critical dimension of support for children and women at the micro level while pointing out that little was known about other caregivers beyond mothers of young children (Engle *et al.* 1996). She emphasized the limited involvement of fathers in child nutrition-related activities but did not discuss the role of older women or grandmothers in household-level caregiving. The findings of this review suggest that grandmothers are major alternative caregivers.

Grandmother social networks: an indigenous social support system

A second cross-cutting pattern identified in the literature from non-Western societies in Africa, Asia and Latin America is the existence of indigenous social support groups through which less experienced women receive advice and support from more experienced ones, especially during pregnancy, childbirth, newborn care and childhood illnesses in both rural and urban settings in Ghana (Jansen 2006; McGadney-Douglass & Douglass 2008), Djibouti (Aubel *et al.* 2007), South Africa (Stewart 1978), Uzbekistan (Barrett 2008), Malawi (Bezner Kerr *et al.* 2008), Senegal [WELLSTART/United States Agency for International Development (USAID) 1996; Niang *et al.* 2006], Mali (Toulmin 1992; Adams *et al.* 2002; Ag Erless 2007), Laos (Aubel *et al.* 1996), Nigeria (Kuteyi 1982; Davies-Adetugbo 1997), Albania (Aubel *et al.* 2004a), Fiji (Aubel *et al.* 1999), Mauritania (Aubel *et al.* 2006), Somalia and Somaliland (FSAU 2007), Colombia (Fonseca & Vega 2004), Chile (María Eugenia Romo *et al.* 2005), Guatemala (Jiménez & Méndez 1996; Bixiones 2007), Mexico, Perez-Gil-Romo *et al.* 1993) and Brazil (Piperata 2008). In all of these non-Western collectivist societies where extended families are more prevalent, and where child care systems are multigenerational, 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 composed of senior women on younger women's attitudes and practices is further explained by the hierarchical lines of communication based on seniority.

In the past 20 years in North America and Europe, extensive research has been carried out on the influence of social networks on individual health-related behaviour. In non-Western societies, however, few studies have comprehensively investigated this fundamental facet of social organization within communities. Nonetheless, a number of studies on nutrition and health topics in Africa, Asia and Latin America do discuss the fact that attitudes and practices of WRA are influenced not only by senior women within households but also by those who are part of grandmother peer groups, or *grandmother social networks*, within the wider social environment. Studies discussed later provide evidence of the influence of grandmother social networks on nutrition-related practices of younger women in both urban and rural settings across all three continents.

In South Africa, social psychologist Stewart (1978) was one of the first to analyse the female natural helping systems, which provide collective support to women and families, especially in times of need. He referred to them as *primary friendship groups* and asserted that they constitute a significant social support mechanism for their members. Stewart argued that in collectivist societies, it is through these informal networks or indigenous helping systems that women receive ongoing support. For example, a breastfeeding woman may receive advice from both younger and older female network members but the advice received from senior members of their social support group (e.g. their mothers, mothers-in-law, aunts, grandmother neighbours) tends to be particularly persuasive, first, because of the recognition of senior women's expertise on breastfeeding and second, because of the confidence that exists between younger women and their more experienced advisors. Stewart observed as well that at critical times in the lives of women and children (e.g. pregnancy, childbirth, illness), the support provided by these friendship groups is invariably intensified.

In urban Accra, McGadney-Douglass & Douglass (2008) investigated the influence of senior women within collectivist family systems on child nutrition practices. The researchers conclude that collectivist values underpinning intergenerational solidarity facilitate younger women's access to 'experience,

information, resources and sound decision-making' (p. 147) of respected senior women within family and community contexts, and when a child is malnourished, it is the senior women in the family who play a central role in providing the required care.

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, were investigated (Adams *et al.* 2002). Research by these authors in two different ethnic groups reveal that members of younger women's social networks are overwhelmingly female and mostly family members, and in most cases, those providing support are older than those receiving it. Adams and colleagues identify four types of interrelated support provided by social network members that affect child nutrition and health: (i) *practical support* including help to younger women with child care and housework; (ii) *cognitive support* consisting of information and advice to promote health and well-being and to deal with illness; (iii) *emotional or affective support* including love, caring, empathy and encouragement; and (iv) *material support* such as money, food or other tangible assistance. The researchers conclude 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' (p. 166). Relative to WHO recommendations regarding MCH practices, some of the support given to women and young children is beneficial, while others are not.

In various other socio-cultural contexts, both urban and rural, the advisory and support roles played by grandmother social networks have been documented, though less extensively than by Adams and colleagues. Elsewhere in rural Mali, Toulmin (1992) discusses the collective support provided by senior women to new mothers and infants by 'groups of elderly women who are responsible for looking after births in a cluster of neighboring families' (p. 224). In both peri-urban Mauritania (Aubel *et al.* 2006) and urban Bamako (Arby & Diarra 2009), senior women unanimously state that in addition to providing support to their own daughters and daughters-in-law, they advise and assist other young

women in the neighbourhood who do not have senior female family members in close proximity. In two ethnically similar areas in Somalia and Somaliland, FSAU (2007) documented the importance of women's social networks as a significant source of information on women's and children's nutrition and health. Women's informal communication and support networks in these two ethnically Somali areas are composed of both family and extra-familial members, including grandmothers, traditional birth attendants, other senior women, female relatives and traditional healers. Similar patterns of communication within social networks are reported from Senegal by Niang (2003) who explains that within such networks, it is the senior women, or grandmothers, who are the key advisors and supervisors during pregnancy, delivery and child care after birth.

Similarly, in Latin America, research results in urban sites in Colombia (Fonseca & Vega 2004) and Chile (María Eugeni Romo *et al.* 2005) reveals that the primary influence on young women's child nutrition practices comes from senior women within the family and secondarily, from social network members outside the family. In two rural areas of Guatemala, Jiménez & Méndez (1996) and Bixiones (2007) document the influence on young mothers of their own mothers, mothers-in-law, TBAs or *comadronas*, and other older neighbour women. In rural Mexico, research on infant feeding concludes that women's practices are primarily influenced by social networks of women in and around the family, most of whom are older (Perez-Gil-Romo *et al.* 1993).

The research evidence reviewed supports the conclusion that in more collectivist cultures prevalent in Africa, Asia and Latin America, younger women rarely make totally independent decisions regarding either maternal or child nutrition or health-related issues. In both rural and urban contexts, women's attitudes and actions are influenced particularly by female members of their own social networks, and the age and experience of network members determines, to a great extent, their degree of influence. The available literature supports the conclusion that in order to fully understand the influence of senior women on child nutrition practices, these experienced advisors must be viewed as part of a collective and culturally

grounded helping mechanism that provides support to women and families both within extended family and neighbourhood contexts (McGadney-Douglass & Douglass 2008).

Men's role in maternal and child nutrition within family systems

A third pattern observed across cultural contexts in the studies reviewed concerns the role played by men related to women's and children's nutrition and well-being including both the influence they wield on their wives and young children and the influence exerted on them by 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, similar to other aspects of intra-household dynamics, men's involvement is more complex than what immediately meets the eye (Matinga 2002). The literature reviewed reveals two determining characteristics of non-Western societies related to men's roles: first, gender specificity in household roles and second, a hierarchy of authority within households. Other facets of men's involvement in maternal and child nutrition revealed through this review deal with their role as *advisors*, or conversely, as *advisees*, in everyday situations and during crisis events.

In more traditional, non-Western societies, there is generally a clear demarcation between the roles of males and females. *Gender specificity* in roles is observed between younger women and men and similarly, between more senior women (grandmothers) and senior men (grandfathers). Specificity in culturally designated roles leads to specialization in specific domains of activity. In all cultures, females play leading domestic roles in the day-to-day care of young children and of their mothers (Mbugua 1999; Aubel 2005). Men are generally responsible for providing financial and other resources for certain household activities including food and for carrying out other tasks critical to family survival, many of which take place outside the household setting. Extensive experience and knowledge in a specific domain, such as child nutrition, confer authority to advise and teach others, i.e. gender specificity leads to gender

specialization and in turn, gender-associated expertise and authority.

Applying this logic in reverse suggests that in domains in which men are not extensively involved, they do not accumulate significant knowledge and consequently, are not viewed by other household members as authoritative advisors. This line of reasoning is supported by evidence from various countries showing that men's knowledge of and involvement in maternal and child nutrition and health issues is generally limited. Evidence of this trend comes from Ghana (McGadney-Douglass & Douglass 2008), Madagascar [Basic Support for Institutionalizing Child Survival (BASICS)/LINKAGES 1998], Mali (Waltensperger 2001a; Arby 2009; Diarra 2009), Congo (Fouts & Brookshire 2009), Malawi (Waltensperger 2001b; Matinga 2002), Senegal (Niang 2003), Mauritania (Aubel *et al.* 2006), Djibouti (Aubel *et al.* 2007), Niger (Keith & Kone 2007; Medecins du Monde 2008), Uzbekistan (Aubel *et al.* 2003), Albania (Aubel *et al.* 2004a), Nicaragua (MOH/Nicaragua 2005), Pakistan (Mumtaz & Salway 2007) and Burkina Faso (Ouoba 2008).

In Niger (Keith & Kone 2007), it was concluded, for example, that men's role after birth is generally limited to providing food for infants and new mothers, and paying for prescriptions. Elsewhere in Niger, a similar pattern of limited father involvement was observed (Medecins du Monde 2008) with malnourished children. In urban Accra, McGadney-Douglass & Douglass (2008) found that most fathers were not at all involved in child care of malnourished children, which was the responsibility of female family members and coordinated by senior women, referred to by the authors as 'primary caregivers'. In Nicaragua, studies in both rural and urban contexts show that men's involvement in newborn care is very limited (MOH/Nicaragua 2005). Similarly, in rural Mexico (Perez-Gil-Romo *et al.* 1993), researchers conclude that 'men are never involved in infant care and feeding' (p. 9). In Malawi, Waltensperger (2001b) 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 during a child's first months of life.

The studies reviewed suggest that there are two distinct levels of activity related to household nutritional matters. At the micro level, the leading household authorities on women and children's nutrition and health are invariably older women as a consequence of gender-specialization and the status conferred on those with greater experience in this domain. At that level, a generally ignored consideration, revealed in the literature, is that senior women both advise and make demands on their sons and sons-in-law related to women's and children's nutrition and health. Contrary to the frequently heard assertion that men are the leading household level *decision-makers*, considerable evidence suggests that in this domain, men are more frequently *advisees* rather than *advisors*. These lines of authority are illustrated by research on neonatal health in Senegal through a husband's statement regarding his own post-partum role, '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' (Niang 2003, p. 23). In contrast, at the macro family level, men typically play a much greater role in mobilizing food resources for the family.

Another critical facet of gender specificity in household settings revealed in documentation from numerous socio-cultural contexts is the distinction between the degree of men's involvement in nutrition-related matters in everyday situations and in emergency circumstances (Niang *et al.* 2006). In daily situations, both fathers and grandfathers play secondary, supportive roles, while younger and senior women are more directly involved. In crisis situations, when special logistical and financial support are required – for example, if a child is severely malnourished and needs to be evacuated to a health centre – men's involvement generally increases (Aubel *et al.* 2003, 2004a, 2006, 2007; Barrett 2008; Ellis 2008; Ouoba 2008).

These conclusions regarding men's roles in infant and maternal nutrition are at odds with the conventional wisdom that suggests that men are primary household *decision-makers* in family health matters (Feireman & Janzen 1992). As with other aspects of intra-household dynamics, there is a tendency to

view men's *decision-making authority and influence* in an overly simplistic way. Few researchers have systematically examined this issue. Matinga (2002), a Malawian researcher, asserts that although men defend their official title of 'household head' and maintain that they are major decision-makers, in reality, with regard to pregnancy and newborn care, men's involvement is relatively limited. The author reports that in reality, it is the senior women who advise both the men and their wives on issues relating to pregnancy and child care. Illustrating Matinga's premise, a male interviewee describes the advisory status of senior women during pregnancy. 'It is the grandmother who plays a major role because she is more knowledgeable about what takes place (in pregnancy), unlike us men. The husband listens to what the grandmother suggests should be done...that is the husband's role' (Matinga, p. 18).

Discussion

Research carried out in numerous cultural contexts across the non-Western world suggests that the involvement and influence of senior women, or grandmothers, in child and maternal nutrition is much more significant than conventionally assumed by international public health and nutrition policy-makers and programme planners. The analysis of extensive research findings from Africa, Asia and Latin America, from both rural and urban contexts, reveals the central role and influence of senior women or grandmothers at both household and community levels.

Across cultural contexts, three patterns are consistently observed:

1. the central role of grandmothers as advisors to younger women, caregivers of both women and children and advisors to men related to nutritional and health matters, especially during pregnancy, childbirth, and with infants and young children,
2. the collective influence of social networks composed of senior women on maternal and child nutrition-related practices, especially during prenatal and neonatal periods and

3. the relatively limited role of men in day-to-day nutrition-related activities with children and women within the family sphere.

All three of these characteristics are consistent with the nature of non-Western societies wherein gender specialization, hierarchical authority of elders and collectivist attitudes prevail. In spite of these realities, however, nutrition policies and programmes at both country and international levels primarily focus on WRA and sometimes target men but rarely involve senior women, or grandmothers, as key actors. I would argue that the predominant, reductionist framework is culturally inadequate insofar as it ignores leading culturally designated household and community actors, namely the grandmothers. The findings of this analysis bring to light an obvious incongruity, or *cultural dissonance*, between predominant familial and community roles, organization and values and the narrow and inadequate Western-grounded framework on which policies and programmes are constructed.

This review sheds light on several key features of non-Western socio-cultural contexts that are generally ignored in public health and nutrition programmes, and in so doing, it challenges nutrition policy makers and programme planners to re-examine the prevailing Western and reductionist conceptual framework that focuses narrowly on WRA. This challenge is strongly reiterated by Airhihenbuwa (1995), who defend the need to look 'beyond the western paradigm' in designing programmes for non-Western contexts. He argues that the predominant approach to health promotion is *culturally inappropriate* insofar as it is based on Eurocentric values, which do not take into account core non-Western cultural concepts, attitudes and patterns of social organization within families and communities.

My contention is that nutrition/health programmes should be grounded in the cultural context of target communities. This implies that programmes should identify culturally designated household and community actors involved in maternal and child nutrition and explicitly include them in community interventions. The rationale for culturally adapted programmes is, first, that communities will be more

receptive to them and second, that greater community interest and involvement can lead to greater programme results.

The three trends that emerge from the research (presented earlier) all underline the gender-specialized, hierarchical and collectivist nature of non-Western societies, elements that are frequently ignored in Eurocentric models and programme plans. These findings support the need to re-conceptualize child nutrition and health policies and programmes in order to make them more culturally relevant. Airhihenbuwa (1995) asserts that the limited results of many past community health and nutrition interventions can be attributed in part to the antagonistic Western cultural values implicit in most programmes.

Based on the aforementioned analysis, several recommendations are formulated to increase the cultural relevance of nutrition and health programmes:

1. In specific cultural settings, formative research should be carried out in order to understand roles, norms, communication networks and decision-making patterns in household and community settings. This assumes that programme practitioners have access to innovative research tools based on a systemic, rather than reductionist, framework that can bring to light key features of family organization and dynamics. Rapid and participatory assessment methods can be used that are neither extremely lengthy nor costly.
2. In order to promote adoption of culturally adapted and grandmother-inclusive approaches, efforts are required to help health sector professionals and community level health workers re-examine their perceptions of both culture and of grandmothers so that they view them as resources rather than obstacles. In addition, both of these categories of health workers need to be skilled in non-directive communication/education methods based on principles of adult education and an *assets-based approach* to community capacity building.
3. The curriculum of basic health training schools should be revised to give greater attention to local realities related to family and cultural systems and to research methods for understanding and

incorporating elements of both into health sector programmes.

4. Lastly, there is a need for additional research in non-Western cultures to either validate or reject the conclusions of this review related to the three characteristics of family organization and influence associated with child nutrition and health.

In most nutrition programmes, indicators of effectiveness deal with nutrition-specific parameters such as exclusive breastfeeding and appropriate introduction of complementary foods. There is some evidence that an additional benefit of culturally grounded programmes, i.e. programmes that build on existing social roles and organization, is that they contribute to greater social cohesion (Aubel 2010). From a systems perspective, this would seem to make sense. It appears that grandmother-inclusive nutrition/health programmes can strengthen communication and cohesion within family systems, which can have other far-reaching and positive benefits for children, women and families.

A major conclusion of this review is that nutrition policies and programmes should give greater attention to the culturally designated roles and hierarchy related to nutrition and health strategies within the family and community and particularly, to the role of grandmothers. More specifically, it is concluded that grandmothers should be actively involved in public health programmes that promote optimal nutrition and health practices for children and women. It is often assumed that grandmothers are unable to learn and change their advice and practices, and this assumption has often been the justification for not including them in community nutrition/health interventions. Several recent nutrition/health programmes have viewed grandmothers as a resource, have explicitly involved them and have produced encouraging evidence that the guardians of tradition are not necessarily averse to embracing new ideas (Aubel *et al.* 2004b).

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