FOOD AND NUTRITION SECURITY AS GENDERED SOCIAL PRACTICE

Anke Niehof

Wageningen School of Social Sciences (WASS), Wageningen University, Hollandseweg 1, 6706KN Wageningen, the Netherlands

Abstract: In many parts of the world, the food security of households and the nutrition security of individual household members, in particular that of children, are still at risk, in spite of the progress made in combatting hunger at the global level. The prevailing opinion among scientists and development practioners alike is that women's empowerment is the key to household food security and good nutrition of children. Similarly, it is thought that gender inequalities manifest themselves in dietary discrimination of women resulting in their lesser access to sufficient and nutritious food. To investigate the credibility of these 'common truths', empirical evidence on women's roles in the social practices that aim at realizing household food security and good family nutrition was reviewed. It can be concluded that women definitely yield and wield power through their involvement in and responsibility for these practices, but that – at the same time – enhancing women's capabilities by improved access to critical resources would benefit their household's food security and their children's nutrition. Furthermore, except for the region of South Asia, gender inequalities do not visibly result in a gender gap in nutrition, although women's specific dietary needs in relation to pregnancy and motherhood are not always recognized.

Keywords: household food security, child nutrition, gender, social practices

Introduction

A few years ago a short film was broadcasted at Dutch television by SIRE, a not-for-profit organization that aims at bringing significant social issues to the attention of the Dutch public. The film pictures a family gathered at the table for the Sunday dinner with the father standing to carve the meat. The text shows what one of the children is thinking: "Who is this man, who always cuts the meat on Sundays?" The message is about the social undesirability of invisible fathers who only on Sundays are part of family life. The fact that the father carves the meat at the Sunday meal, traditionally the best meal of the week, also highlights his role as provider or 'breadwinner'. His family is food secure and his earnings make the nice meal possible, but his work turns him into a virtually absent father during weekdays.

In a nutshell and at micro level, the film captures important themes that at the global level in specific contexts constitute urgent and inter-related social problems: food, nutrition and gender. The IFPRI annual report of 2015 comments on the situation as follows. The positive news is that the Millennium Development Goal of halving global hunger has been achieved and that during the past two decades global undernourishment has fallen from 19 percent to 11 percent (IFPRI 2015: 1). However, the report also notes that food and nutrition insecurity are not just problems of poor countries. Also in Middle Income Countries (MICs) such as India, Brazil, China, Mexico and Indonesia, "persistent or rising inequalities across wealth, gender and education add to the burden of hunger and malnutrition", resulting in child stunting alongside a rising incidence of overweight (IFPRI 2015: 15). To improve the situation, inequalities should be reduced, those relating to gender in particular: "Given the importance of gender equity in improving food security and nutrition, MICs should focus on *empowering women*" (IFPRI 2015: 17, my italics). Unequal access to good food and nutrition represents an inequality and – at the same time – reflects other social inequalities, though in different ways across the life course (Bras 2014).

In this paper I will focus on the gendered social practices which are involved in the synergistic relationship between food, nutrition and gender. In prevailing paradigms, gender inequality and food and nutrition insecurity are thought to reinforce one another in a vicious cycle with gender inequality as the propelling factor (e.g. Quisumbing et al. 1995; Ulmer 2003). In an overview article Richards et al. (2013) conclude that a large body of literature spanning twenty years provides evidence of the links between women's status and child health and nutrition. Consequently, to turn the vicious circle into a virtuous one, reducing gender inequalities by empowering women would be the obvious starting point (IFPRI 2015). Taking this line of thinking gives rise to two questions. First, in what ways would women's empowerment increase food and nutrition security for their families? The second question is whether gender inequalities in general translate into gender differences in access to good food and nutritional status, also referred to as the gender gap in food and nutrition (cf. Backstrand et al. 1997).

This paper proceeds by outlining the conceptual framework in which the main concepts are discussed and mutually related. Subsequently, relevant research findings are presented, and – at the end – a general discussion and conclusion is formulated. Narrative evidence from primary research will be used to explore the diverse empirical manifestations of the issues involved and – where possible – this evidence is linked to existing review studies.

Conceptual framework *Frame 1: Food and nutrition security*

After the concept of food security was coined at the World Food Conference in 1974, for a long time it was commonly defined as access to enough food by all people at all times for an active and healthy life (Maxwell 2001). In recent years, this definition was further refined as all people having physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life (FAO 2013). The word 'access' is common to both. This goes back to the seminal work of Amartya Sen (1981) who shifted the then existing emphasis on the adequacy of food supplies to one on the capability of individuals to access food through entitlements. The FAO amendments reflect the increasing attention for nutrition security, which in the former definition was rather implicitly indicated by the phrase 'active and healthy life'. Even if people have access to sufficient food in terms of calories they can still be malnourished, because they do not get the micro-nutrients their dietary needs require. Micro-nutrient malnutrition is also referred to as 'hidden hunger'; it is increasingly recognized as a severe problem (IFPRI 2015).

The discourse summarised above and the definitions it produced are still a bit floating; the question of whose food and nutrition security we are talking about is not addressed. I see food security as anchored to households and nutrition security to individuals. Conceptualising households as resourcemanaging family-based groups that are geared towards meeting the primary and daily needs of their members (Niehof 2011), implies that for most people it is in their household that actions are undertaken and strategies deployed to meet their food needs. To be able do this, households need resources. This links food security to livelihood security. Household livelihood security is a necessary condition for household food security, although on the short term households may allocate reserves to meet their members' food needs at the expense of assets needed for livelihood generation (Balatibat 2004). Livelihood failure makes households vulnerable to shortfalls in income and food, resulting in nutrition inadequacy and poor health (Roa 2007).

Food security at household level does not automatically translate into good nutrition of the household's individual members. There are several reasons for that. First, people's dietary needs differ according to sex and age, and these different needs are not always recognized (Backstrand et al. 1996). In the second place, culturally-underpinned discriminatory practices in the intra-household distribution of food may favour men over women and boys over girls. The third reason has to do with how the food is consumed and whether the body is able to use the micro-nutrients contained in the food. For example, intestinal parasites may obstruct the uptake of iron and thereby cause anaemia. In the ways and the environment in which the food is consumed, care is an important intermediate factor. This is recognized in the UNICEF model that shows the linkages between maternal care, dietary intake and health status of children (Balatibat 2004: 42). Mothers are the caretakers of their children's food intake and may cause their children's diet to be unbalanced (Michaelsen et al. 2009). A mother's inattentiveness may jeopardize the dietary intake of her children, even in food secure households (Blijham et al. 2007). A panel study among schoolchildren in India found a significant positive association between the mothers' education and the nutritional status of their children (Dasgupta et al. 2008).

The safety of foods is also mentioned in the amended definition of food security. Water, hygiene and sanitation are important intermediate variables in food safety, because of their direct (biological contamination of food) and indirect (health status) influence on the bodily uptake of calories and micro nutrients (Bhaskaram 1999). The IFPRI report hails "the greater understanding of the role of water, sanitation and hygiene in nutrition" (IFPRI 2015: 1-2). Food safety is at risk not only when the food is biologically contaminated but also when it contains dangerous chemicals. A recent study conducted in Vietnam describes the concerns of women about the contamination of vegetables by agro-chemicals (Wertheim-Heck 2015).

Frame 2: Gender, agency and women's empowerment

Gender refers to the different, ideologically and culturally underpinned roles and positions of men and women in society. Giddens (1984: 85) called gender one of the most "allembracing criteria of the social identity." Gender intersects with other markers of social identity such as age, class, and marital status. At these intersections gender is manifested and performed, for which resources are required. Availability of resources and women's access to these can strengthen women's agency and bargaining position in settings where gender inequalities prevail such as households, which Sen (1990) characterized as a context of both cooperation and conflict.

Elsewhere, I have described agency as "conscious action aimed at achieving certain outcomes, with the actors concerned considering the efficacy and appropriateness of their behavior in a given context that comprises the institutional and normative environment within which daily life is enacted" (Niehof 2007: 189). Agency yields and wields power. Kabeer sees agency in the positive sense ("power to") as "people's ability to make and act on their own life choices", and agency in the negative sense ("power over") "as the capacity [...] to override the agency of others." She also notes that power can operate "in the absence of explicit forms of agency", because of institutional bias (Kabeer 2005: 14). Additionally, I would

note that hegemonic (patriarchal) discourses that perpetuate inequalities also wield power, by justifying curtailment of the agency of those who are subordinated. Further, I concur with Kabeer (2005: 15) that "resources are the medium through which agency is exercised" and that "resources and agency make up people's capabilities." Merging these notions, I see women's empowerment as enhancement of their capabilities in such a way that they can better make and act on their own choices and overcome patriarchal constraints.

Connecting the two frames by social practices

If women's empowerment is the key to closing the 'gender gap' in food and nutrition and to improved household food security, then one should look at the practices that contribute to achieving food and nutrition security and assess the potential for women's enhancement of their capabilities regarding these practices. Theories of practice are gaining ground. Warde (2014: 286) lists the following emphases in theories of practices that – for more or less obvious reasons – are relevant for understanding food- and nutrition related practices: performances, praxis, practical competence, habit and routine, collectivity, shared understanding, sequence, and the material.

The first frame presented above comprises three sequential and partly overlapping clusters of practices and outcomes: livelihood generation, food security and nutrition security, all anchored to the household as the immediate context in which the relevant practices are performed. Because nutrition security is to a large extent conditioned by food security and because there can be no food security without some degree of livelihood security (Balatibat 2004), the practices involved can "be imagined to be nested" (Warde 2014: 296). In this paper, I focus on the clusters of food security and nutrition security in the sequence of nested practices to investigate the role of women's empowerment and the gender gap in food and nutrition. Drawing on the discussion above and on a model that pictures the linkages between households and the food chain (Niehof 1998: 45), Table 1 lists the relevant practices that can be identified.

Food processing and food storage practices feature in both columns. Regarding food security such practices are important for preserving food supplies, whereas in relation to nutrition security the practices should be such that quality is maintained and biological contamination avoided. Women's agency and the resources available to them (capabilities) are an essential factor in all of these practices, because in "most societies women continue to carry the responsibility for the mental and manual labor of food provision" and perform most of the food-related work (Allen and Sachs 2012: 3). The gender gap would be visible in the second column, particularly in relation to food distribution and consumption practices.

The empirical picture

Women and household food security

Food procurement is embedded in livelihood generation through backward linkages because of the resources it requires. In rural areas in many parts of the world, smallholder food crop production is the cornerstone of rural households' food security. A study conducted in the highlands of Southwestern Ethiopia (Negash and Niehof 2004) provides a good example of such linkages and women's performance at these. In this part of Ethiopia, enset is the staple crop. Enset resembles a banana plant but the edible parts are the pseudo stem and the underground corm, not the fruit. Plant materials from the pseudo stem and the corm are put in a pit and covered with leaves for fermentation. From the fermented product, called kocho, bread is made, which is consumed at least twice a day. Men prepare the soil and do the planting and transplanting, women do the weeding, harvesting and processing. Although in the prevailing patrilineal kinship system all land is passed on through men, husbands should prepare plots for their wives' enset plants in the backyard of the homestead. The women can harvest enset from these plots whenever they want and are expected to feed the household from their plots. They have to make sure that there is enough *kocho* for the household's food needs. To the people the number of enset plants and the diversity of enset clones a household has, signifies household food security. This is not just an emic perception; it has been noted that in Ethiopia the enset zones have suffered few food crises (Rahmato 1996). So, in the case of the enset-based food system, women are in fact the custodians of household food security, not only because of their labour but also through having a rightful claim to a plot of their own and being the decision makers on matters of harvesting, processing, and

Table 1: Key practices in food and nutrition security

Food security practices \rightarrow	Nutrition security practices
Food procurement:	Selective food procurement practices aimed at enhancing food safety
Food crop productionBuying, borrowing and exchanging foodGathering of wild foods	
Food processing Food storage Changing the composition of the food-sharing unit	Food processing Food storage Food preparation Intra-household food distribution Food consumption and hygiene, including supervision of minors

selection of clones. All these constitute crucial capabilities.

Whether the staple is *enset*, maize, banana or rice, there always is a gendered division of labour in producing the crop. This division of labour is affected when significant numbers of adult men or women no longer contribute their share of labour, as in the case of male outmigration or in a context of HIV/AIDS. In China, the lack of male labour due to migration was found to cause problems for the wives left behind. It became difficult to find labour to plough the fields (a men's job) and the extension service was not responsive to the needs of the women who had to do the farming on their own (Yuan and Niehof 2011). In Nepal, male outmigration led to agricultural land left fallow, and among the younger generation food security became increasingly equated with having income from remittances to buy enough food instead of with having a reliable food supply from own cultivation (Gartaula et al. 2012). In sub-Saharan Africa, a negative impact of HIV/AIDS on both household food security and gender equality has been observed (Müller 2005). A study on the implications of AIDS for household food security in two districts in Uganda severely affected by the epidemic, found that "in the face of declining household incomes, non-expansion of household assets, small landholdings and other production-related constraints coupled with high AIDS prevalence levels, the capacity of households, particularly female-headed ones, to ensure sustained household food sufficiency becomes questionable" (Karuhanga 2010: 128). When families face food shortages because of AIDS, one or more child(ren) may be sent to female relatives for fostering, so that there are fewer mouths to feed and the children do not suffer. In such cases, it is women who decide on this and who make the arrangements, not only in households of single women and children (Paradza 2010) but also in households headed by men (Du Preez 2011).

The examples above show that among smallholders food production can be at risk because of labour constraints and external shocks. Such issues are not easily resolved because of their multi-faceted and poverty-based nature. Women's empowerment, in the form of better access to land, to information and to extension services, mitigates these problems to some extent, but it is not a panacea. The author of a thesis on the effects of the feminisation of agriculture caused by male labour migration in China concludes that the results "do not support the argument that men's migration and labour feminization in agriculture provide the space for women to plead for more equal gender relations with men. The unequal gender relations are re-affirmed and re-produced through this process" (Meng 2014: 163).

Wild foods, such as berries, fruits, mushrooms, specific tubers, wild honey, fish or snails, are gathered in a variety of ecosystems all around the world. Especially women and children are experienced and knowledgeable practitioners, and their gathering activities can yield a meaningful contribution to the daily menu. In rural Northeast Thailand, for example, gathered wild foods represented 50 percent of the items comprising the local diet during the rainy season and 30 percent during the dry season (Setalaphruk and Price 2007: 2).

The practice of women sending their children to a relative when they can no longer feed them shows the importance of social networks in women's strategic manoeuvring to safeguard the family's food security. In the large body of literature on the value of social capital for people's survival and advancement, an analysis of the differential effect of gender is often lacking (cf. Molyneux 2002; Franklin 2005). Regarding household food provision, however, the fact that the borrowing, exchanging, giving or receiving food is channelled through female social networks cannot be ignored. In rural Bangladesh, food borrowing is daily practice and is mainly done by women, in the virilocal extended-family homesteads particularly among the wives of the brothers sharing the homestead. Bigger rice loans may be obtained from landlords, but these have to be paid back with interest (rice or money) after harvest (Ali 2005). Among single migrant women in Accra, Ghana, obligations of and entitlements to food support are extended from the own domestic unit to local networks of women traders in the market community. The networks are underpinned by propinquity and morality, but are also bounded by ethnicity and common area of origin (Tufuor et al. 2015). Similarly, the food exchange and borrowing among the women in the Bangladesh study does not cross religious (Muslim-Hindu) lines and, among Hindu families, is constrained by caste stratification (Ali 2005).

All around the world, women play pivotal roles in food storage and processing. The Ethiopian case of the *enset* food system described above provides a good example. Among the matrilineal Minangkabau in West Sumatra, Indonesia, women have always been in charge of the rice stocks, formerly stored in the rice barn opposite the *rumah gadang*, the traditional extended-family house (van Renen 2000). In East Java, Indonesia, women maintain the *in vivo* stored cassava tubers, which are dug up, processed and prepared as staple when – in the preharvest period – rice stocks have dwindled (Solichin 1996). In Northern Mozambique, women reign over the granaries and the "food is controlled, cooked and distributed by the older women" (Arnfred 2007: 149).

Women and family nutrition

The women in the Vietnam study (Wertheim-Heck 2015) try to control food safety by making sure that the vegetables they buy and prepare are free from agro-chemicals. They do this step-wise. First, they select the site or location where they buy the vegetables based on experience and routine. Then they select a retailer or vendor whom they regard as trustworthy and, subsequently, they select the product by combining product characteristics (size, freshness, seasonality, geographical origin). Finally, at home they carefully wash the vegetables before preparing them. The author concludes: "Food safety is continuously reproduced along pre-given lines within existing behavioral routines" (Wertheim-Heck 2015: 201).

Cooking, the next practice in the sequence of relevant practices, is "almost universally coded as women's work" (Allen and Sachs (2012: 29). In Northern Mozambique,

Arnfred (2007: 149) observed cooking to be "a pride and privilege, also for the young wife." In Northern Ghana, women are judged by the quality of the soup that goes with the staple, for which they have to make sure they have the proper ingredients (vegetables and spices), from their own kitchen gardens or from the market. In extended-family households, where several women share the kitchen, the most senior woman allocates the labour and ensures that the soup is properly prepared (Pickbourne 2011). In large parts of Southeast Asia, women's iconic responsibility for feeding the family legitimates their control over the household budget and their engagement in income-generating activities (Firth 1966; Hy Van Luong 1998; Niehof 2007). A quote from a focus group discussion in the Bangladesh study shows that women can also experience this responsibility as a burden: "Men never want to know how we manage; they only want their food during meal times. At the time of a crisis we have to go hungry and feed our children and husbands", whereas men say: "The quality of a wife shows in how she can manage" (Ali 2005: 168, 169).

In the trajectory between the preparation of the food in the kitchen and its actual consumption, the way the food is distributed and the setting in which it is consumed affect the nutritional uptake by individual household members. This applies to children in particular, as illustrated by the following cases from the Philippines. In the city of La Trinidad, children come in at meal times but the mothers are unable to make the children sit down at the table and finish their plates. According to the authors, this could explain the children's vitamin A and C deficiencies (Blijham et al. 2007). In Leyte Province (Visayas), only the pre-schoolers' action radius is sufficiently within the scope of the mother's attention to enable her to control the children's food intake. This is not the case for school children, but they are less vulnerable than the younger ones. The survey data shows the mothers' level of education and nutrition knowledge to have a significant positive effect on child health. A significant effect of the source of drinking water on child morbidity was found as well (Roa 2007: 254). In a study on new communities in resettlement sites in Indonesia and the Philippines, in the Philippine site the availability of public spaces (sidewalks, basketball courts) was negatively associated with children's health. The author explains that children play with their friends in these places and, when hungry, go home to get some money to buy food from sidewalk vendors, concluding: "These children are likely to catch viruses and bacteria from these places and from the food they buy" (Quetulio Navarra 2014: 129).

A very different picture emerges from a study in two Wolayta villages in lowland South West Ethiopia, where the staple is maize. In these agricultural communities, eating together is highly valued and the mothers make sure that all children, including the little ones, get their appropriate share of the food. The author observed that "children accessed family food in an attentive, supportive and protective atmosphere, in a daily meal structure that sought to meet their needs in terms of meal frequency and timing" (Szava 2015: 427). The mothers worry about the adequacy of their children's diet. They would like to offer more diverse and rich foods but do not have the resources to do so. The author notes, however, that despite the mothers' understanding about 'good food', their efforts "focussed on the quantity of food (to make sure the children were content) rather than on its quality (the diversity and bioavailability of nutrients)" (Szava 2015: 431). In the research area, food hygiene is compromised by the proximity of livestock. At the same time, women's food preparation "was always preceded by the careful rinsing of the hand and the utensils and dishes used in cooking and serving" (Szava 2015: 436). Additionally, the women's way of handling dairy products (butter and cheese) by means of fermentation inhibits harmful bacteria and, therefore, adds to food safety.

The cases discussed above show the pivotal role of mothers in safeguarding family nutrition, especially that of children. As in the case of household food provision, also in feeding their children women rely on female support when they cannot manage on their own. A study among female household heads in Sri Lanka found that these women attach much value to childcare support from kin and the community, and that this help is channelled through female networks. The following quote illustrates this: "Looking after children on occasions and more importantly giving children food and meals is common practice amongst us" (Ruwanpura and Humphries 2004: 196). A similar pattern was found among single migrant women in Accra (Tufuor et al. 2015). Richards et al. (2013) highlight the supportive role of senior women (grandmothers) in younger women's child care practices. In the Ethiopian study discussed above (Szava 2015) the mother's mother turned out to be a much valued source of information and support regarding child nutrition and health. The women would not turn to their mother-in-law, even though in the prevailing virilocal setting she would live close by. Although the women's support system was localized and relied on sisters-in-law, neighbours and friends, women "generally avoided asking for advice of their mothers-in-law" (Szava 2015: 352). Also in the Bangladesh study (Ali 2005) sisters-in-law are part of the women's food support system and no mention is made of the mother-inlaw. Hence, it could well be that the senior women who are important for child nutrition and health are maternal rather than paternal grandmothers.

The gender gap in nutrition

Gender differences in food intake and in nutritional status have been observed in many societies and are referred to as the gender gap in nutrition (Backstrand et al. 1997). In the Bangladesh study, women complain that at a time of food shortages they have to go hungry to feed their children and husband (Ali 2005), indicating dietary discrimination in favour of men. In the Wolayta households, however, the researcher observed that "gender seemed to play a lesser role in food sharing than age, and old age invited positive bias" (Szava 2015: 283). The first example points to the gender gap in nutrition, the second does not. In this section, I shall address the issue of the gender gap in nutrition.

Backstrand et al. (1997) point out that gender disparities

in nutritional status always have biological components because of different energy needs, for example - and social components - culturally and socially underpinned gendered differences in dietary quantity and quality. The researchers collected data on the nutrition of schoolchildren in 290 households in six rural communities in Mexico. They found no evidence of dietary discrimination of girls, irrespective of household wealth, but girls did score lower on dietary quantity than boys. This is because they are less physically active than boys (playground observations), hence have lower energy needs. However, the authors warn that when diets are of poor quality, "the ability to eat more of a diet can be the difference between malnutrition and health" (Backstrand et al. 1997: 1758). This could make girls more prone to the risk of malnutrition than boys, even in the absence of dietary discrimination.

DeRose et al. (2000) did a cross-country study on the relationship between the 'female disadvantage' - gender inequalities resulting in excess female mortality - and unequal access to food. The data reveal only for South Asia "a clear pattern of male advantage reflected in anthropometric data on children" (DeRose et al. 2000: 526). This was not found for other regions, but the authors note that aggregate macrolevel data may mask female disadvantage in specific settings. Also when looking at children's food intake, no overall gender differences are found. What evidence there is, "comes solely from South Asia" (DeRose et al. 2000: 527). Regarding food intake of adults, no systematic bias against women emerged from the studies, although poorer women have problems in meeting their dietary requirements when pregnant or breastfeeding. In assessing these rather unexpected findings, the authors come up with several explanations. Their final conclusion is that "discrimination against women operates through mechanisms other than calorie deprivation. Most importantly, perhaps, it operates through differential access to health care, education, and leisure" (DeRose et al. 2000: 539).

The studies discussed above clearly do not support an unequivocal confirmation of the existence of a gender gap in nutrition in societies where gender inequalities explicitly feature in social organization, except for the region of South Asia. However, even though women might not suffer from dietary discrimination in terms of calories, they still may have micro-nutrient deficiencies, also given their role in biological reproduction. DeRose et al. (2000: 518) conclude: "When food is part of female disadvantage, it appears to be a problem of quality (micronutrient intake) much more often than one of quantity (calorie intake)."

Discussion and conclusion

This paper is an attempt to provide answers to the pertinent question raised by Allen and Sachs (2012: 3) of how to "better understand the complicated and contradictory connections between gender and food." First, there is the issue of the role of women's empowerment. In my view, women's empowerment is always a good thing, if only for the sake of the women themselves. However, in relation to food and nutrition security women's empowerment is given an instrumentalist twist; it is allegedly good for household food security and family, especially children's, nutrition. Much in the same way as women's access to micro finance is expected to help women meet their practical gender needs for the benefit of their families (Binaté Fofana et al. 2015).

The instrumentalist approach implies an acknowledgement of women's key role in household food provision and child nutrition. This role is visible in the practices I discussed in this paper. Women wield power when they reign over the food stocks and rule the kitchen. But, do they need to be further empowered, and - if yes - in what way? Empowerment is about the "transformative forms of agency that do not simply address inequalities but are used to initiate longerterm processes of change in the structures of patriarchy" (Kabeer 2005: 16). The cases reviewed picture women as rather well empowered, i.e. having the necessary capabilities to perform their role as guardians of household food supplies and gatekeepers of family nutrition. One of the capabilities required is the ability to mobilize the female support network when needed. It is noteworthy that in a context of HIV and AIDS women's support relations in their caring for persons living with AIDS are not only mostly female but also proved to be matrilineal connections (Niehof 2015). The same might apply to female support for child nutrition, as is illustrated by the key role of the mother's mother in the Ethiopian case (Szava 2015) and by women agreeing to foster the children of their matrilineally-related female relative when requested (Paradza 2010; Du Preez 2011). Women's participation in female support networks empowers them. In the case of the female household heads in Sri Lanka, the women's female networks that had emerged in a situation of crisis were more effective than the "crumbling" traditional patriarchal support structures and were in fact undermining these (Ruwanpura and Humphries 2004: 200). Women caregivers for people living with AIDS gain authority and decision-making power, in this way generating a 'matriarchy of care' (Niehof 2015).

However, there is scope for women's empowerment. Having better and sustainable access to critical resources would enhance women's capabilities and their exercise of "transformative forms of agency" (Kabeer 2005: 16). The Wolayta women, for example, would like better gardens where they can grow vegetables to be able to provide their children with richer foods, but the proper watering that such gardens require is now constrained by lack of both water and time (Szava 2015). In this case, improving local water sources would help. The finding of Roa (2007) that the level of education and nutrition knowledge of mothers had a significant positive effect on child health suggests an empowering effect of education and access to information. Also DeRose et al. (2000) conclude that discrimination against women operates among others through differential access to education (and health care). Empowering women by education and information transcends the instrumentalist motive, because "education increases the likelihood that women will look after their own well-being along with that of their family" (Kabeer 2005: 16).

To conclude, the evidence of a diversity of detailed

empirical studies does neither reveal a consistent lack of empowerment of women that has an inhibiting effect on household food security nor does it indicate a serious gender gap in nutrition, except for South Asia. On the other hand, however, food and nutrition security are still critical issues in many parts of the world. To address these issues, empowering women by increasing their access to the resources they need, is the only way to turn vicious cycles into virtuous ones. Women cannot be circumvented in interventions aimed at enhancing household food security and child nutrition. Such interventions should start with a contextual analysis of the prevailing gender relations and inequalities, and should have a focus on meeting women's practical gender needs and facilitating women's empowerment.

References

Ali, A. (2005) Livelihood and Food Security in Rural Bangladesh: The Role of Social Capital. PhD Thesis Wageningen University.

Allen, P. and Sachs, C. (2012) Women and food chains; the gendered politics of food. In: P. Williams-Forson, P. and Counihan, C. (Eds) Taking Food Public: Redefining Foodways in a Changing World. Routledge, New York and London, pp 23-40.

Arnfred, S. (2007) Sex, food and female power: Discussion of data material from Northern Mozambique. Sexualities 10(2): 141-58.

Backstrand, J.R., Allen, L.H., Pelto, G.H. and Chavez, A. (1997) Examining the gender gap in nutrition: An example from rural Mexico. Social Science & Medicine 44(11): 1751-1759.

Balatibat, E.M. (2004) The Linkages Between Food and Nutrition Security in Lowland and Coastal Villages in the Philippines. PhD Thesis Wageningen University.

Bhaskaram, P. (1999) The vicious cycle of malnutrition-infection with special reference to diarrhoea, measles and tuberculosis. Indian Pediatric 29: 805-814.

Binaté Fofana, N., Antonides, G., Niehof, A. and Van Ophem, J.A.C. (2015) How microfinance empowers women in Côte d'Ivoire. Review of Economics of the Household 12(4): 1-21. DOI: 10.1007/s11150-015-9280-2.

Blijham, N., de Kan, L. and Niehof, A. (2007) Determinants and adequacy of food consumption of children in La Trinidad, Philippines. International Journal of Consumer Studies 31(3): 195-203.

Bras, H. (2014) Inequalities in Food Security and Nutrition; A Life Course Perspective. Inaugural Lecture. Wageningen University, Wageningen.

Dasgupta, P., Saha, R. and Nubé, M. (2008) Changes in body size, shape and nutritional status of middle-class Bengali boys of Kolkata, India, 1982-2002. Economics and Human Biology 6: 75-94.

DeRose, L.F., Das, M. and Millman, S.R. (2000) Does female disadvantage mean lower access to food? Population and Development Review 26(3): 517-547.

Du Preez, C.J. (2011) Living and Care Arrangements of Nonurban Households in KwaZulu-Natal in a Context of HIV and AIDS. PhD Thesis Wageningen University.

FAO (2013) The State of Food Security in the World. FAO, Rome.

Firth, R. (1966) Housekeeping Among Malay Peasants. The Athlone Press, London. $[2^{nd} ed.]$

Franklin, J. (Ed.) (2005) Women and Social Capital. London South Bank University, London.

Hy Van Luong (1998) Engendered entrepreneurship: Ideologies and political-economic transformation in a Northern Vietnamese center of ceramics production. In: R.W. Hefner (Ed.) Market Cultures: Societies and Values in the New Asian Capitalism. Westview Press, Boulder, pp. 290-314.

Gartaula, H.N., A. Niehof, A. and Visser, L.E. (2012) Shifting perceptions of food security and land in the context of labour out-migration in rural Nepal, Food Security 4(2): 181-194.

Giddens, A. (1984) The Constitution of Society. Polity Press, Cambridge UK.

IFPRI (2015) 2014-2015 Global Food Policy Report. International Food Policy Research Institute, Washington DC.

Kabeer, N. (2005) Gender equality and women's empowerment: A critical analysis of the Third Millennium Development Goal. Gender and Development 13(1): 13-24.

Karuhanga, B.M. (2010) Multilayered impacts of AIDS and implications for food security among banana farmers in Uganda. In: A. Niehof, G. Rugalema and S. Gillespie (Eds) AIDS and Rural Livelihoods: Dynamics and Diversity in Sub-Saharan Africa. Earthscan, London and Washington DC, pp. 117-133.

Maxwell, S. (2001) The evolution of thinking about food security. In: S.M. Devereux and S. Maxwell (Eds) Food Security in Sub-Saharan Africa. ITDG Publishing, London, pp. 13-31.

Meng, X. (2014) Feminization of Agricultural Production in Rural China: A Sociological Analysis. PhD Thesis Wageningen University.

Michaelsen, K.F., Hoppe, C., Roos, N., Kaestel, P. Stougaard, M., Lauritzen, L., Moigaard, C., Girma, T. and Friis, H. (2009) Choice of foods and ingredients for moderately malnourished children 6 months to 5 years of age. Food and Nutrition Bulletin 30: 343-404.

Molyneux, M. (2002) Gender and the silence of social capital: Lessons from Latin America. Development and Change 33: 64-79.

Müller, T.R. (2005) HIV/AIDS, Gender and Rural Livelihoods in Sub-Saharan Africa. Wageningen Academic Publishers, Wageningen, the Netherlands.

Negash, A. and Niehof, A. (2004) The significance of enset culture and biodiversity for rural household food security. Agriculture and Human Values 21(1): 61-71.

Niehof, A. (1998) Households and the food chain: How do they relate? In: Sustainable Livelihood for Rural Households: Contributions from Rootcrop Agriculture. UPWARD, Los Baños, the Philippines, pp. 37-49.

Niehof, A. (2007) Fish and female agency in a Madurese fishing village in Indonesia. Moussons 11: 185-209.

Niehof, A. (2011) Conceptualizing the household as an object of study. International Journal of Consumer Studies 35(5): 488-497.

Niehof, A. (2015) Contours of matriarchy in care for people living with AIDS, in: M. Barnes, T. Brannelly, L. Ward and N. Ward (Eds) Ethics of Care: Critical Advances in International Perspective., Policy Press, Bristol UK, pp. 139-151.

Paradza, G.G. (2010) Single women's experience of livelihood conditions, HIV and AIDS in the rural areas of Zimbabwe. In:

65

A. Niehof, G. Rugalema and S. Gillespie (Eds) AIDS and Rural Livelihoods: Dynamics and Diversity in Sub-Saharan Africa. Earthscan, London and Washington DC, pp. 77-95.

Pickbourne, L.J. (2011) Migration, Remittances and Intra-Household Allocation in Northern Ghana: Does Gender Matter? PhD Thesis University of Massachusetts.

Quetulio Navarra M. (2014) Mending New Communities After Involuntary Resettlement in the Philippines and Indonesia. PhD Thesis Wageningen University.

Quisumbing, A.R., Brown, L.R., Feldstein, H., Haddad, L. and Pena, C. (1995) Women: The Key to Food Security. International Food Policy Research Institute, Washington DC.

Rahmato, D. (1966) Resilience and vulnerability: Enset agriculture in southern Ethiopia. In: T. Abata, C. Hiebsch, S.A. Brandt, and S. Gebremariam (Eds) Enset-based Sustainable Agriculture in Ethiopia. Institute of Agricultural Research, Addis Ababa, Ethiopia, pp. 83-106.

Richards, E., Theobald, S., Kim, J.C., Rudert, C., Jehan, K., and Tolhurst, R. (2013) Going beyond the surface: Gendered intrahousehold bargaining as a social determinant of child health and nutrition in low and middle income countries. Social Science & Medicine 95: 24-33.

Roa, J.R. (2007) Food Insecurity in Fragile Lands: Philippine Cases Through the Livelihood Lens. PhD Thesis Wageningen University.

Ruwanpura, K.N. and Humphries, J. (2004) Mundane heroines: Conflict, ethnicity, gender, and female headship in Eastern Sri Lanka. Feminist Economics 10(2): 173-205.

Sen, A. (1981) Poverty and Famines: An Essay on Entitlement and Deprivation. Clarendon Press, Oxford UK.

Sen, A. (1990) Gender and cooperative conflicts. In: Tinker, I. (Ed.) Persistent Inequalities: Women and World Development. Oxford University Press, Oxford UK, pp. 123-145.

Solichin, A.W. (1996) How farmers cope: Case studies of decision-making in six farm households in South Malang, East Java. PhD Thesis Wageningen University.

Szava, A. (2015) Explaining Child Malnutrition in Two Villages in South West Ethiopia: Local Views and Local Opportunities. PhD Thesis Menzies School of Health Research, Charles Darwin University.

Setalaphruk, C. and Price, L.L. (2007) Children's traditional ecological knowledge of wild food resources: A case study in a rural village in Northeast Thailand. Journal of Ethnobiology and Ethnomedicine 3: 1-11.

Tufuor, T., Niehof, A., Sato, C. and Van der Horst, H. (2015) Extending the moral economy beyond households: Gendered livelihood strategies of single migrant women in Accra, Ghana. Women's Studies International Forum 50: 20-29.

Ulmer, K. (Ed.) (2003) No Security without Food Security – No Food Security without Gender Equality. APRODEV, Brussels.

Van Renen, J. (2000) The salty mouth of a senior woman: Gender and the house in Minangkabau. In: J. Koning, M. Nolten, J. Rodenburg and R. Saptari (Eds) Women and Households in Indonesia: Cultural Notions and Social Practices. Curzon Press, Richmond, Surrey, pp. 163-179.

Warde, A. (2014) After taste: Culture, consumption and theories of practice. Journal of Consumer Culture 14(3): 279-303.

Wertheim-Heck, S.C.O. (2015) We have to eat, right? Food safety concerns and shopping for daily vegetables in modernizing Vietnam. PhD Thesis Wageningen University.

Yuan, J. and Niehof, A. (2011) Agricultural technology extension and adoption in China: A case from Kaizuo Township, Guizhou province. The China Quarterly 206: 412-425.