

Women's spaces of empowerment: A case of chicken keeping, food security and nutrition in Sanza Ward, Manyoni District, Tanzania

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Abstract

This study examined the relationship between chicken keeping and household food security and nutrition. Chicken keeping in particular is understood as an important aspect of women's culturally constructed spaces. It was the interest of this study to explore how these women negotiate within these traditionally assigned spaces and benefit from them, including using them for household nutrition. To accomplish this, the study used the qualitative design. It was found that the value that women attach to chicken keeping was different from that of men. Men's interest in chickens was also rising as their monetary value kept on increasing, hence interfering with women's intentions and need for autonomy in chicken keeping activities as well as the covert contestations between men and women surrounding chicken sales. At the same time, the culturally defined women's feeding responsibilities within the household shaped ways of chicken use and sale, which also inform on how chicken and chicken products can be used for household nutrition. This study, thus, argues that the taken-for-granted assumptions about women maintaining their households with what they own, such as chicken keeping, needs to be questioned by interrogating the cultural, and social factors to do with chicken keeping and different abilities in maintaining this therein.

Keywords: women's space, chicken keeping, household food security, nutrition

Introduction

The current study examined how women negotiate their gendered positions within the household to benefit from what is traditionally or culturally assigned to be their spaces. In the context of this study, spaces refer to the socially-constructed areas that reflect repetitive and routinized activities and experiences of women's production and reproduction roles in the society (Low, 2006; Farago, 2016). Specifically, the study examined how chicken

keeping relates to women's ability to provide for household food security and nutrition.

Chicken keeping being a predominantly domestic production process is close to women's productive and reproductive roles. Yet, as explained by Njuki and Sanginga, (2013), the contribution such understated production activity has to household maintenance, is usually undervalued or not understood. This perception is also influenced by gender relations on how women's and men's activities are regarded. In many cases, women's patterns of activities and roles delineate them in domestic spaces-the household and become responsible for household maintenance, feeding and caring for children (*Ibid*). The assigning of these roles is said to give these women a sense of ownership and a feel for exercising their power, and sometimes becoming more creative in improving their situations in these spaces (Swartz, 2013; Davis, 1999).

It is also contended that often these spaces are defined, shaped and challenged by political, religious, socio-cultural, and economic processes within the society. Hence, depending on how they are defined, social spaces usually have an impact on the distribution of resources and activities between men and women which also affect both their daily activities and experiences within the society (Agarwal, 1992; Bajracharya, 1994). Following this argument, various studies (e.g. Njuki and Sanginga, 2013; Galie *et al.*, 2015) explain that the nature of the division of labour and patterns of ownership of resources between women and men differ within and between. In some societies, the traditional structure of families makes it difficult for women to have authority over resources during times of economic strains. It is men who head households and control all forms of property, including the wives. They make major decisions in households, and control even properties that are managed by their wives, properties such as land, despite women's main role in agricultural production (Hodgson, 2017; Dancer, 2015).

This tendency, however, should not be generalised since, in some societies, there is shared ownership of livestock and other resources, as noted in some studies. For example, among the pastoral Maasai of northern Tanzania, women can have access to and control over the products from large herds of livestock, cattle, but usually do not own these cattle. These women manage the processing of milk, and this allows them to have control of its distribution such as milk for calves, consumption and sale (Hodgson, 2011). In other pastoral societies such as those in India and Ethiopia, assets like livestock are equally distributed between women and men (Rubin *et al.*,

2010; Yisehak, 2008; Flintan, 2008; Kristjanson, *et al.*, 2010). In India for example, despite the common perception that only men own bullocks, they were also owned by landless women who rented them out to farmers. In this article such cultural differences in livestock ownership are referred to as part of the culturally constructed women's space by considering women's chicken keeping in the Sanza society. The article also discusses how that space can be used to benefit and achieve households' food security and nutrition.

It is a common practice for many households, especially rural households, to keep small and large herds of livestock as a source of livelihood. The 2014 Tanzanian Food Security and Nutrition Assessment Report, holds that livestock production is among the major agricultural activities for rural communities whereby out of 5.7 million agricultural households, 40% keep livestock. Stocks include cattle, sheep, goats, donkeys, water buffaloes, pigs, chicken, and turkeys (URT, 2014). However, in most communities, women's livestock ownership falls under small stocks such as chicken, turkeys, geese and sometimes goats. Men are more likely to own large livestock such as cattle and donkeys. This distribution is sometimes associated with the cultural interpretation of women's status within the household compared to men's status (Njuki and Sanginga, 2013; Antonopoulos and Floro, 2005).

Since most communities regard chicken as simply petty livestock, not worth any serious management intervention, they thus do not attract valuable reference to wealth compared to cattle and other animals which are given a higher economic value and are culturally placed under a person who has higher status within the household (Njuki and Sanginga, 2013; Agarwal, 2002). Despite their lesser cultural value, poultry is an important component in the livestock industry and the most common is chicken keeping in Tanzania. Both hybrids, exotic and indigenous chicken are kept. The main indigenous breeds include Kuchi, Kishingo, Sukuma, Kinyafuzi, and Kiduchu²⁴ (URT, 2006). Chicken keeping is said to be the least labour demanding kind of livestock keeping. Most rural households accumulate chickens in good times - after a good harvest and deplete them in bad times - poor production, hunger, illness for the consumption smoothing (Njuki and Sanginga, 2013). When chickens are sold, they provide these households with income which is then directed to fulfilling their basic needs such as food, health, clothing, as well as cultural roles such as gift giving. Chicken

²⁴ Kuchi, Kishingo, Sukuma, Kinyafuzi and Kiduchu are Swahili names used for different types of local chickens.

products like eggs and meat are also utilized to supplement household food nutrition and diversify the diet.

However, diseases such as Newcastle and Fowlpox are identified as major hindrances to organic chicken production in most of the rural areas (Bagnol, 2009; URT, 2012). These diseases cause death to chicken population, making it difficult in rebuilding the stocks every year (*Ibid.*). As a result, this affects food security regarding loss of income and a decrease in chicken products within households. It is also claimed that more women than men, sometimes fail to maintain their stocks because of poor information or skills regarding their proper management (Budaka, *et al.*, 2005; Kimani and Ngethe, 2007; Rubin *et al.*, 2010). A study carried out in Dodoma Tanzania indicated that most women compared to men were not aware of the Newcastle disease vaccination, while there were some ongoing campaigns about the same issue in the area. Nevertheless, this is likely to impact chicken production negatively because most women lagged behind in the importance of modern vaccination, and this had an impact on their chicken keeping activities (Bagnol, 2009).

Since chicken keeping is prominent, the likelihood that it is expected to have impact on household food security and nutrition is also assumed to be high. However, this has not been the case as observed in most communities with significant levels of chicken keeping including the Singida Region. The 2014 Tanzania National Nutrition Survey Report identified 34.7 per cent of chronic malnutrition among children of 0-59 months nationwide as shown in Table 1 below.

Table 1: Status of malnutrition of children aged 0-59 months in poultry keeping regions of Tanzania 2014

REGION	NUMBER OF POULTRY IN REGION	STUNTING RATE (%) 0-59months	MODERATE ACUTE MALNUTRITION (%) 0-59months
MBEYA	246,017	36.0	2.0
TANGA	187,889	23.8	4.6
KAGERA	186,023	41.9	2.8
KILIMANJARO	179,244	18.3	4.0
MOROGORO	178,836	36.9	3.6
MWANZA	173,844	34.2	4.1
TABORA	167,713	31.8	2.0
DODOMA	166,896	45.2	4.7
MARA	154,512	32.1	1.2

REGION	NUMBER OF POULTRY IN REGION	STUNTING RATE (%) 0- 59months	MODERATE ACUTE MALNUTRITION (%) 0-59months
SINGIDA	139,241	34.0	4.2
RUVUMA	138,962	48.4	2.4
SIMIYU	131,417	26.1	2.2
MTWARA	125,706	36.3	1.9
MANYARA	124,956	37.4	2.9
SHINYANGA	124,761	30.0	2.1
GEITA	109,399	46.0	1.1
KIGOMA	107,789	48.6	3.5
IRINGA	107,513	51.3	0.5
ARUSHA	105,717	27.4	4.2
LINDI	94,242	36.2	2.3
NJOMBE	85,527	51.5	2.2
PWANI	85,186	33.7	3.1
RUKWA	82,204	47.5	2.3
DAR ES	77,166	16.3	2.6
SALAAM			
KATAVI	41,058	43.8	1.3

(URT, 2014).

Table 1 shows nine regions with very high stunting levels, that is- above 40 per cent, of children aged 0-59 months old, despite having a reasonable number of chickens. These regions are Iringa, Kagera, Njombe, Dodoma, Ruvuma, Rukwa, Kigoma, Katavi, and Geita. Singida Region, although not among the top nine regions with acute stunting, was found to have Global Acute Malnutrition (GAM) of about 4.7 per cent. The rate for Dodoma and Tanga Regions was 4.8 per cent, and for Mara Region it was 4.9 per cent (URT, 2014). Several initiatives have been done to improve household production by improving chicken production for the community and nutritional value. One such effort is the NKUKU4U²⁵ Project that was initiated in 2013 in Tanzania and started to be implemented in 2014 in Manyoni District- Sanza ward.

The Project's name was Strengthening Food and Nutrition Security through Family Poultry and Crop Integration in Tanzania and Zambia. It was a five-year project (2014-2019), and it was an intervention by the Australian

²⁵ NKUKU4U meant 'chicken for you', a name that was constructed to reflect on strengthening food and nutrition security through family poultry keeping and crop integration project implemented in Sanza, Manyoni District, Tanzania.

Government in collaboration with the Tanzanian Government. The main objective of the project was to reduce childhood under-nutrition by analyzing and testing opportunities to enhance the key roles played by women in improving poultry keeping and crop integration, and efficiency to strengthen household nutrition. The project was initiated through a gendered participatory training programme and involved women as chicken keepers, and project implementers as community workers and vaccinators. A number of households that kept chickens were involved in the project through administering the Newcastle vaccination and monitoring of monthly child nutritional status. As a result, I took interest in carrying out a study that would examine and explain women's chicken keeping activities in relation to household nutritional decisions in the Sanza Community, while at the same time acknowledging the implementation of NKUKU4U Project in the area.

Methodology

The study is based on the explanatory design, through which there was a need to formulate a precise investigation and further explanation on different ideas and insights related to the chicken keeping activity as a women's space in relation to household food security and nutrition. To achieve this goal, the study used the qualitative approach, and applied a non-probability sampling procedure, specifically purposive and snowball sampling methods, to select the respondents. Purposive sampling was used to select the Sanza Ward, and the two villages of Chicheho and Ikasi. The villages were selected under the criterion of chicken keeping production, and were among the villages in Manyoni District that were experiencing problems of under-nutrition and food insecurity. The two villages are inhabited by the Gogo, an ethnic group found in both Dodoma and Singida Regions. Secondly, purposive sampling was also used to select key informants. Snowball sampling was used to select both female and male-headed households that were interviewed.

The main criterion used to select these households was the chicken keeping activity. Other economic activities included crop farming (maize, sorghum, sweet potato, cashew nuts, sesame, and sunflower) and the keeping of other types of livestock such as cattle, goats and donkeys. Women farmed alongside men. However, they engaged more in food crop farming, and men in cash crop farming. During the dry season, they both engaged in salt harvesting, and some of the sampled male-headed household had vegetable gardens where the men were cultivating tomatoes and amaranth leaves for sale. In agricultural communities like Sanza, it is common to find women

and men, having different roles and shares in the production process. This division is determined by many factors, including existing patriarchal relation and increasing commodity production in the rural sector. In the female-headed households, it was mostly crop farming and salt harvesting, and some of these women also had to work as labourers on other farms to secure income.

Qualitative data collection methods were used to generate data; in-depth interviews and focus group discussions (FGDs). There was also the use of informal interviews (casual conversation) with respondents as a way of getting adding information. Besides, observation and documentary review were other methods that the researcher used in data collection. The methods triangulated each other, and data collection was in the Swahili language.

Table 2: List of interviewees in Ikasi and Chicheho villages in Sanza ward

Respondents	Number	Male	Female
Ward and village leaders		3	3
Health workers		2	1
	1		
District nutritionist		1	
	1		
Vaccinators		2	1
	1		
Community assistants		2	
	2		
Traditional leaders		2	1
	1		
Female in Female Headed Households		5	
	5		
Female and male in Male Headed Households		14	4
	10		
Total	21	31	9

These consultations sought to interrogate recurring gendered patterns that surround the control of productive resources in the Sanza Community and within households, socio-cultural and economic factors that surround women's chicken keeping and household nutrition and relationships between levels of awareness of the value of chicken keeping to nutritional levels at household and community levels. Specific questions that were asked included: what was the household organization on the role of women and men on food management?; to what extent was chicken keeping an

aspect of household sustenance?; and, to what extent were decisions regarding chicken use and sell influenced by household nutritional needs? These were accompanied by follow-up questions. Also, three FGD's were conducted to extract more information on issues of resource access and control and matters of negotiations.

For analytical considerations, the study adopted the sociological understanding of women's space, whose conceptualization identifies it as a cultural construct defined by two processes. Firstly, it is constructed by traditional social institutions which influence attitudes about women's 'rightful position' in society and the household, i.e. what she should do, how she should behave, and in which circumstances (Ritzer, 2010; Duncan, 2014). Secondly, women's spaces also reflect on women's agency and the several institutions and structures that permit women to 'operate' their spaces according to their needs. Women often interpret their situations and sometimes negotiate or circumvent tradition to behave in a manner that is beneficial to their circumstances (Mwaipopo, 2000; Swartz, 2015; Giddens, 1984). However, not always are women able to successfully exercise such agency to the fullest because of alternate impeding processes within the cultural, social or political context that define access to enabling factors such as mobility, or economic resources.

Following this line of thinking, this study used the relationship between three key variables to examine women and chicken keeping in Sanza Ward, (i) Traditional social institutions (norms, customs and values that influence gender relations) (ii) Economic assets (property, material resources, the market;) and (iii) political institutions or structures of power relations; which avail opportunity for women to reinterpret tradition and circumvent them for their benefit. The relationship between these variables constructs what is termed as women's spaces, and eventually, its implication to the status of household food security and nutrition.

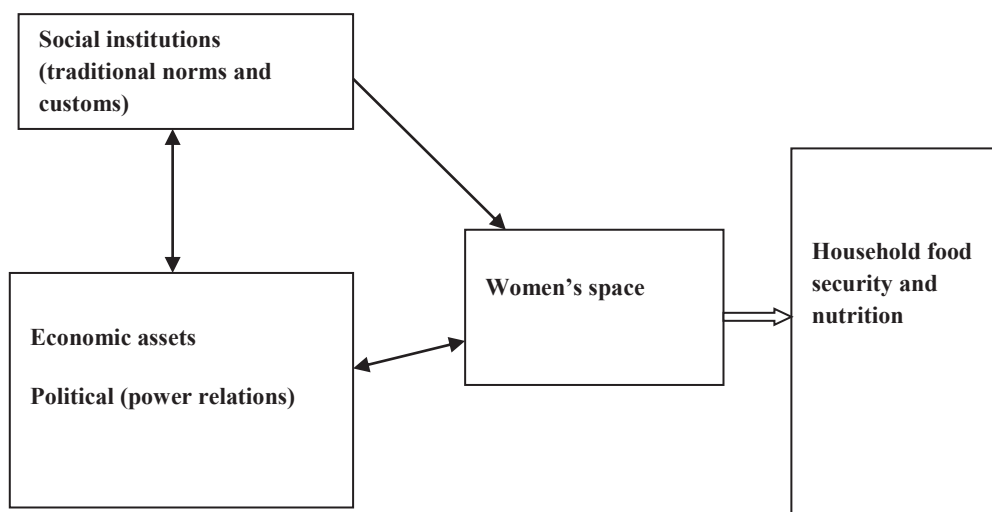


Figure 1. Construction of women's space and its relationship to household food security and nutrition (author's own construction)

Acquisition and Ownership of chickens as women's pride

There were different sources of ownership of chickens in Sanza households, indicating a combination of intricate cultural traditions and market forces. Chickens could be accessed through gift-giving. A household could receive a chicken as a gift in ceremonies like wedding, during child birth or a relative's visit. For example, mothers and grandmothers gave their daughters one or two chickens as part of their bridal property. Regarding the norms of socialization in the Gogo tradition, women associated chickens with the ability to maintain their homes. Hence, it was customary for brides to be given chickens as a symbol of starting their homes, and they understood that they had a duty to produce more chickens which would imply that the household would never go hungry, and in case of emergencies, they could be easily sold, unlike cattle and goats.

This explanation does not necessarily generalize the idea that household food security and nutrition depend on chickens, rather, chickens have since been taken as a necessary women's property to support them fulfil their roles in the sustenance of their household. A study conducted by Quisumbing and Maluccio (2003) also found that the assets which women bring to their marriages in the form of livestock or land are associated with higher budget shares on food, and lower budget shares on household and household goods.

Another common way that was used, especially by poorly resourced households, was the traditional system of sharing livestock known as

kukoza.²⁶ It is a kind of social relation that people in Sanza have constructed that establishes a social network among themselves, and this system was used for all animals. When a household owns a large number of animals and does not have enough space to keep them, or even enough capacity to feed them, they share them with the people they trust. Households could adopt hens from each other for a period of time until the hens produce some *vifaranga* (chicks) after which, the adopting household was obliged to return the hen to its real owner. The distribution of chickens followed a traditional understanding of sharing to benefit each participant in the arrangement. For example, when a hen reproduced ten (10) chicks, and maybe only six (6) chicks survived, then the owner takes four (4) to five (5) of them, and left one (1) or two (2) chicks, depending on their negotiation arrangement. As it was illustrated;

In our community, most of the poor households cannot purchase animals, and when you see them with animals, you know they belong to someone else. It is normal for a rich household to give animals to a poor household for them to manage. A household can use this system to start keeping chickens by borrowing the hen and when it produces some chicks, they return the hen and some of the chicks and leave others under their ownership. (FGD/Mixed sex/Chicheho)

This arrangement would often happen between women in the households as it was believed that women were very effective in forming social networks that they could use as a form of reciprocity in extending their cultural spaces—at least all women had to have chickens at home. Further, it was mentioned that the ability and willingness of neighbours to help each other was an important aspect of food security, and women used that as a form of negotiation and strategy to secure household resources. This arrangement helped women to produce chickens and used them as a source of household ‘quick income’ that could be used to purchase food items and other needs. Households could also buy chickens from the market, traders or even neighbours. Apparently, due to household financial difficulties, especially among women the traditional sharing system was the most preferred.

It is important to understand that a female and a male are socially constructed. In turn, they shape themselves in relation to culturally defined roles, status, position and representations of femininity and masculinity.

²⁶ Kukoza is a Gogo practice referring to the traditional animal sharing system whereby one's livestock is kept by a relative or a neighbor through which the animal products- milk, manure or eggs are shared. Partners in this case also share the offsprings in turns.

These constructions are inserted into a web of social meanings which also take up different positions within it. The experience of being a female, for example, is a role accompanied by societal expectations imposed from a very young age, the earliest and perhaps the most common process where boys and girls are taught their cultural roles and what is expected from them (Tumbo-Masabo and Liljestrom, 1994). This is no exception in the Gogo tradition of the people of Sanza. However, the current situation in Sanza Ward illustrates how changing gender relations have impacted traditionally defined responsibilities and positions at the household level. This change is brought by factors like the impacts of gender equality campaigns, increasing rural-urban migration where rural women tend to have more burden of household responsibilities as men leave them behind, and increasing commodity production and its impact on the allocation of household resources. For most women in Sanza, the autonomy to keep chickens and being able to control its proceedings was one of the many ways of ensuring the sustainability of food security for their households.

One of the FGD participants in Chicheho mentioned that;

We do not discuss or seek anybody's permission to purchase a hen or bring a hen home. It is actually our own decision, and in fact it is expected of us to make sure that at least we seek for or buy two or three chickens for the home. Chickens are our secured resource which is increasingly becoming valuable to us as women.
(FGD/Female/Chicheho)

This explanation does not mean that men could not purchase or bring chickens to the household; rather it was expected of women to be the ones to initiate and purchase chickens. Also, men's ideas about chicken showed that they were generally consenting to chicken being associated more with women than with themselves because of their traditional values. This was widely expressed during interviews and it was clear that the value of chicken to women was important. Often in circumstances of food shortage, men only cared about the main dish, the maize or the millet to make *ugali*²⁷. They feel responsible for supplying the main staple, and it is assumed that women should fulfil the complementary aspect of providing relish.

Besides, in female-headed households, chickens were not only kept for emergencies; they also supported other activities performed by women. They were also mainly used as a source of capital to establish other small income-generating activities. Chickens together with other types of

²⁷ Staple food in East Africa

livestock have greater value compared to male-headed households. The value of animals to these women is often associated with their limitation on ownership of most resources. Some of the female heads managed to reproduce large flocks which they could sell in the market through auction, or to local traders who passed by their households. The income was used to buy animals such as goats, or could add to local brews and food business, or even adding to agricultural inputs. These women explained how difficult it was sustaining their families with a disadvantage of limited resources compared to male-headed households, and that it was necessary for them to have multiple investments and activities so that they could raise more income and that would assure sustainability of basic needs, including food. Being able to purchase agricultural inputs assured their cultivation activities, which would increase food availability in the household.

Chickens are quick accessed capital when you manage to have them in the household. I started by borrowing two from my neighbour and I ended up producing enough chickens that I bought goats and used a part of the money to rent a piece of land. I am still thinking of selling these goats and buy a donkey to support me in my cultivation activities. (IDI/FHH/Female/Ikasi)

Another important aspect that influenced the decision whether to keep chickens or not was chicken diseases, and the most common in the Sanza Ward was the Newcastle disease (ND) (*mdondo*). ND is a viral disease of poultry, and is considered responsible for loss of economic livelihood and household nutrition as during the outbreak, there is high mortality of chickens. This was a threat to the local people, especially women, because the household could lose all the chickens produced at once. According to the Veterinary Investigation Center, the common season for the disease outbreak was between July and November, during the dry season. The ND has no treatment, and only a vaccination can be administered to control it. Although, some traditional herbs were used by the local people, the chances for survival were defined as half-half, and only a few households managed to keep the chickens. This could be illustrated by data from the NKUKU4U baseline study and progress report in Sanza:

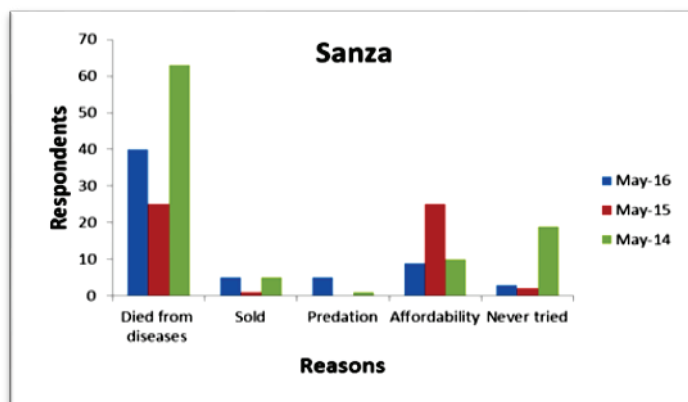


Figure 2. Reasons for not keeping chickens in Sanza from 2014 to 2016 (NKUKU4U Annual Progress reports, 2014, 2015, 2016).

As it was explained by village vaccinator in Chicheho;

‘The Newcastle disease has always been a threat to the locals. A household could keep a small number of chickens, let’s say five to eight, and only for consumption as the chicken market was also very low. Other people attempted to treat the disease using traditional herbs but, in most cases, they did not seem to work. When the disease strikes, it is the women who are most affected. (IDI/Vaccinator/Female/Chicheho)

Hence, it was observed that in the Sanza Ward, the production of large numbers of chickens was a recent phenomenon, and even the value of chickens had grown over time. The introduction of the NKUKU4U Project raised awareness on prevention and treatment of chicken diseases in the community. The Project implemented a community-based ND vaccination programme where there was participatory training for community vaccinators (women and men selected from the villages). Through the vaccinators, a thermotolerant 1-2 ND vaccination was administered, and a service fee was charged. The vaccination exercise was done three times a year, March, July and November, and the vaccination was brought during that time in quality dosage containers and well stored. The cost for the vaccination was TZS 50 per bird, and it was observed that households identified to have large chicken flocks participated more in the exercise as they had much to lose. This was a voluntary exercise, and so there was no uniformity in participation or penalty for not participating.

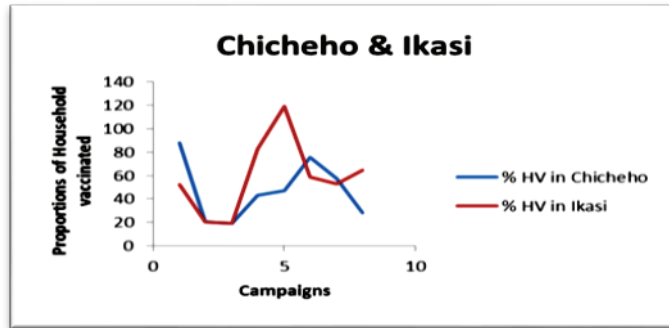


Figure 3. Proportion of households' participation in chicken vaccination in Ikasi and Chicheho Villages (NKUKU4U Annual Progress Report, 2016)

Management of ND as extending women's space

The NKUKU4U intervention and subsequent introduction of a vaccination was a significant boost to women in managing their chickens stocks, hence asserting themselves as able women, albeit the costs involved. Initially, when the first vaccination was administered, there was the presence of a chicken illness compatible with ND in the area, which also caused widespread chicken mortality and made people react negatively against the vaccination. Women chicken keepers were also among the resisters. However, during this study, there were already changes of mindset after increasing the awareness of chicken keepers and the effectiveness of the vaccination. Still, men perceived the chicken vaccination activity as a women's activity, and because of women's financial limitations in the household, this added more burden to them-with no exceptions to female-headed households.

Such cases were raised and explained by village vaccinators on the limitation of the vaccination process in several of the households as a result of debts as they failed to pay for the costs. They said that during the process men, in the absence of women, would often refuse to pay and waited for women to be present to cover the costs. Paying for chicken vaccination was difficult but also important for women because they would rather incur the cost than lose their chickens - this was both women in male-headed and female-headed households. The income that women used for the payment was gained through small income generating activities such as alcohol local beer brewing, salt making, food vending and sometimes they sold some of the chicken to pay the bills. The implication of this on chickens in relation to household food security and nutrition was that, on one hand, when a

household did not vaccinate its chickens, they were much more at the risk of dying of the ND. On other hand, selling chickens due to financial constraints to pay for the vaccination costs, could lead to a reduction in the number of chickens within the household and limits its use. Yet, women needed to pay the costs of maintaining the sustainability in chicken keeping.

To further the above discussion, observation at the livestock markets which were held once a fortnight was informative on the type of exchanges taking place among men, and between women and men.

Women and decision to sell chickens

The study noted that chickens were a lucrative commodity in the weekly markets, but it was noted that chicken traders were dominantly men. In these exchanges, it was also evident how animals, including cattle, goats and chickens, could be used in exchange for maize, cloth and many other needs. The chicken market involved local traders and buyers who came mainly from Dodoma and Dar es Salaam Cities, and the price per chicken ranged between TZS7000 and TZS11000.²⁸ This suggests that, when produced in large quantities, chickens were capable of widening household livelihood strategies.

From such observations, a large number of local people who sold their chickens to outside buyers did not necessarily own them, rather they were traders (middlemen) who also bought the chickens from village households and mostly from women. This was a common system of the chicken market value chain in the villages. Middlemen travel between the households on bicycles or motorbikes with a woven-stick transport cage. One trader could buy between 17 and 25 chickens from a number of households, depending on the availability and needs of household members. This did not imply that those who kept chickens could not have access to the market; rather to most community members chickens could be sold anywhere and anytime as long as there was a buyer. This applied to both female- and male-headed households. Traders or buyers coming from markets in Dodoma and Dar es Salaam buy chickens flock from the local traders (middlemen). The organic chickens are usually preferred over the exotic breeds, as they are considered to be healthier and tastier. It is for this reason that the indigenous breed is more expensive. Consequently, it was observed that there was a high demand for the indigenous chickens in urban markets with traders complaining about its low supply as the demand keeps growing. This also explained the increasing monetary value of chickens in Sanza community.

²⁸ TZS stands for Tanzanian shilling, the country's currency.

Moreover, not every exchange involves middlemen from chicken owner to the market place. Sometimes, households skip the middlemen in the value chain, and take their chickens directly to the market. Cases where households directly accessed the market was when they wanted to sell a large number of chickens at a better price, and men were more involved in the market than women. It was reported that men were better negotiators, and there was a good chance for them to get a better price at the market compared to women. This was also a limitation to female heads who would rather negotiate their large flocks with middlemen than traders at the market.

This shows that the arrangement on chicken sale was related to women's household responsibilities, their time constraints, and their limitation on market networks. It was observed that women selling chickens from households rather than the market allowed them to fulfil other responsibilities such as taking care of the children. Also, it seemed more effortless for them to sell to middlemen from their houses than at the market where it could be difficult to develop some new connections with traders from outside Sanza. Nevertheless, the limitation of women's participation in formal markets seemed to limit their access to good prices of their chickens which directly or indirectly impact their roles on household sustenance, including food security and nutrition. For instance, it was observed that the price was TZS 9000-11000 per chicken at the market, compared to selling to middlemen at TZS 7000.

Yet, this process of decision making on chicken selling could not be compared to other animals, such as cattle and goats, which could only be sold by men. To some extent, women had a level of freedom on selling and using the chickens, and somehow, there was room for their financial autonomy where they could decide on how to use the income (Aklilu *et al.*, 2007). During this study, it was difficult to establish how much was used directly in the purchase of food, but it was certain that some of the income was intended for food needs. Though, as it seemed that women were given some leeway, it did not eradicate their subordinate status especially women in male headed households. In one way or another, male heads had to be informed of the decisions on the sale and even engaged in chicken sale themselves compared to female-heads where they had autonomy to make that choice themselves. From the observation and discussions, the local people in the Sanza community did not perceive women's role in chicken management as giving all women autonomy over its use, but chicken keeping offered a space in which these women could negotiate and feel that financial autonomy.

All in all, the implementation of a community-based ND vaccination programme started to show some good results as a number of chickens were increasing in the village, and there was an increasing demand at the market. Chickens were becoming more of startup capital in establishing other livelihood strategies, and the interesting part was the growing interest in men's involvement in the production. The more the interest of men and increase in chickens' value in the market, the higher the possibilities of reducing women's decision to use the chickens and their sustainability in chicken keeping activity. This is because the intention of keeping chickens might change (at least for men) as well as the definitions on the ownership and decision towards the resource.

Household chicken consumption and women's nutritional decisions

Ideas about nutrition in Sanza households were examined in relation to how women and men understood, and therefore availed for their houses, the kinds of food produced and accessed. In both Ikasi and Chicheho villages, the decision on what to eat and where to get food to cater for household needs were observed as basically resting on women's shoulders. These decisions, however, depended on ownership of resources, ability to access certain resources or the choices that a woman would have to make between certain alternatives and enable her to feed her household. A woman's ability to handle food security and nutrition for her home was one of the highest measures of a woman's having control of her 'space'.

The most common diet for the main meal consumed by the local people included milk, *ugali*, wild *amaranth leaves*, *mlenda*, *kipari*, *pumpkin leaves and pea leaves*²⁹ (vegetables) and *sardines*. Other seasonal food crops include beans and cowpeas. Porridge, sweet potato and cassava could be used for breakfast depending on the season. Consumption of both beef and chicken meat was not so often in most households, even those which kept chickens as seen in Table 6.

²⁹ Amaranth leaves, *mlenda* and *kipari* are common Sanza wild vegetables that women picked from local forests. Pumpkin leaves and pea leaves are vegetables women could grow in small household gardens.

Table 3: Household chicken consumption per month

Household	Average number of chickens per month	Chicken meat consumption per month	Chicken eggs consumption per month
Female Headed Household	7 to 12	1	0
Male Headed Household	9 to 15	2	1

(NKUKU4U Visual Diary, 2016).

As shown in Table 6, the few times that households consume meat were associated with the tradition of eating meat on special occasions such as during holiday seasons or guest visits. Also, from the discussions, regular eating of chicken meat was often during the ND season when households that did not vaccinate their chickens knew that they were at the risk of losing their chickens. As such, they would slaughter them before they died. In very few cases, the meat was used as an alternative relish during the dry season when there was shortage of vegetables. Yet, this behaviour could not easily be generalised as there was diversity between households that kept a large number of chickens which seemed to have more leeway of using chicken meat than those keeping a small number of chickens. For most poor households, the dietary structure relied much on the availability of that food, and in many of these households, food consumption did not take into account the nutritional value of the food supplies. Food security and nutrition were all about having three meals per day: i.e. breakfast, lunch and dinner, and it did not have specifics but as long as, it was a sufficient meal for each member.

During this study, most households were facing the problem of food shortage, and they could barely afford two meals per day. In this situation, women had to find other means to feed the children such as collecting wild fruits like ‘*ndawi*’³⁰ which they used for making porridge. The idea of any meal having nutritious value to people was not easily deciphered but it was clear that women wanted to satisfy hunger. Despite the emphasis on consuming chickens and eggs as part of nutritional diet, women were yet to use chicken for consumption. For them, the economic value of chickens was

³⁰ *Ndawi* are wild fruits in Sanza that are normally used during the dry season for preparing porridge for children, and are sometimes used as a meal by older members of households.

of more importance since the income gained from the sale of chickens could be well budgeted for many household needs. Slaughtering a chicken for consumption or eating eggs was defined as wastage of wealth. The nature of women's responsibility on feeding the household shaped them to increase more value on chickens as a resource and grew to protect it. They would say that slaughtering a chicken only covered one or two meals per day, depending on the size of the family and for women this was not so economical.

Women emphasized that their responsibility in household food moulded them to be more careful and creative in making decisions regarding chicken use whereby they had to overcome both their husbands constraints and their income limitations. In this regard, Ibnouf (2009) shows how women are more likely to use available resources and skills to further improve the welfare of their families, especially the nutrition and health aspects. Frequent eating of eggs was seen as limiting the reproduction of chickens. Women explained that the whole purpose of keeping chickens was to ensure continuous reproducing chickens to secure their availability as a household investment. Also, the risk of ND, meant that eating eggs put a household more at risk due to having a small number of chickens, which might all die.

It is not the case that we do not like to eat chickens or eggs but we have to choose ways that we benefit more. You eat a chicken today and then tomorrow you have nothing, or you sell and buy food that a house could eat for two to three days. That is why we are being very careful with using chickens (IDI/FHH/female/Chicheho)

More importantly, the monetary value of chickens was even higher in female-headed households compared to women living in male-headed households because in most cases, food production in female-headed households was limited as a result of limited access to land and other productive resources as mentioned above.

Furthermore, it was also observed that despite the economic value women had on chickens, to some extent, they still saw chickens as simply a meal for the family, and especially a meal for men. In those exceptional situations where chickens were for consumption, the meat was prepared depending on the size of the household. The distribution of a chicken to the household members was culturally determined, males being more privileged, and normally men-heads would have more pieces than other members, including children. This was explained by the women themselves, that they would give men the good parts such as the bottom (thigh), the breast and gizzard. While the women did not cite the nutritional content of these chicken parts,

the breast and thighs are scientifically known for their rich nutritious value (see Kralik and Kralik, 2017), which can partly explain this tendency. Conversely, children and women would often have wings, legs, the neck, and the head. The liver and heart were women's parts, and usually they ate them while cooking in the kitchen. When men were asked about this distribution during this study, they said that it was all up to the women in the kitchen.

On the other hand, this kind of household food preparation and distribution was also associated with women's defined identity of being a good wife. They did what was expected of them culturally, and in return, they also expected some kind of support from their partners. Not only in Sanza community, but women's ways of satisfying their husbands through meals is also observed in other communities where for women, it is not simply adhering to the defined cultural expectations. Rather, women also see it as a way of negotiating and operating their space (Nikiema *et al.*, 2008). However, this also implied that the efforts of women to care and make sure that their children consumed nutritious food was often hampered by the fact that children did not regularly consume the chickens, and when they did so, they missed out on the nutritious portions of that meat. Therefore, taken for granted assumptions about women sustaining their responsibilities of maintaining their households with what they own, such as chicken keeping need to be questioned by interrogating the cultural and social factors surrounding chicken keeping.

Conclusion

This study establishes that debates about women and household food security and nutrition are only meaningful if they are understood within the intersection of social relations and gendered norms embedded in household ownership and access to resources. This is because we cannot ignore the fact that there are differential power relations with often conflicting preferences and interests between women and men in the society around key household resources, in this case, chickens. Hence, the control of food production and consumption is not only an outcome of the division of labour and gendered responsibilities, but also informed by such power relations and the changing identities by both women and men. These processes, eventually, have an impact on household food security and nutrition.

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