

Food Security among Male and Female-headed Households in Eden District Municipality of the Western Cape, South Africa

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ABSTRACT This paper examined food security status among male and female-headed farming households in Eden District Municipality, Western Cape, South Africa. Simple random sampling was used to select 31 male and 19 female headed-farming households. A structured questionnaire was used for data collection while Mann-Whitney U and Wilcoxon test were used to determine differences in food security status among the two groups. The result showed that 58 percent of the females were between 41-50 years and 42 percent of the males were above fifty years of age. About 77 percent of male and 64.4 percent of female headed households had between 2 to 4 years farming experience. A significant difference exists in food security status ($Z = 2.115$, $p = 0.34$), with higher mean rank for males (28.44) and females (20.71). Both household heads indicated that poor storage, poor market, lack of credit and land tenure highly affects their household food security.

INTRODUCTION

Food security is the availability at all times of adequate world food supplies of basic food-stuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices (FAO 2006). In 1983, FAO's analysis focused on food access, leading to a definition based on the balance between the demand and supply side of the food security equation: "Ensuring that all people at all times have both physical and economic access to the basic food that they need" (FAO 2006). In 1986, the World Bank Report on Poverty and Hunger focused on temporal dynamics of food insecurity, the report introduced the distinction between chronic food insecurity, associated with problems of continuing poverty and low incomes, and transitory food insecurity, which involved periods of intensified pressure caused by natural disasters, economic collapse or conflict (FAO 2006). Food security exists when all people at all times have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life." This widely accepted definition also reinforces the multidimensional nature of food security which includes: food access, food availability, food utilization and stability among others.

South Africa ranks among the countries with the highest rate of income inequality in the world. It has extremely high levels of poverty. The South

African government has committed to halving poverty by 2015. Achieving household food security is a critical component in meeting that objective (HSRC 2007). While South Africa may be a food secured nation, large numbers of households within the country are food insecure. In South Africa, the cause of food insecurity is not due to a shortage of food but rather an inadequate access to food by certain categories of individuals and households in the population (Vogel and Smith 2002). Food insecurity is not an exceptional, short-term event, but is rather a continuous threat for more than a third of the population (Human Science Research Council 2004). The HSRC further states that the majority of South Africans buy their staple foods from commercial suppliers, rather than growing it themselves, and are therefore dependent on having (direct or indirect) access to cash. Among the unemployed in South Africa, the main sources of cash are insecure piece jobs, the government's old age pension and child support grants and private transfers from working relatives and neighbours. In addition to cash, households need to have access to land for producing food to supplement insufficient cash they receive. Accessing natural resources for harvesting of wood fuel, wild food and livestock production is also an important factor. Other entitlements include access to family and community networks for sharing available food.

There are numerous challenges in identifying strategies for household food security. Food

security is multi-dimensional in nature and changes over time, making accurate measurement and policy targeting a challenge. There is sometimes confusion between national food security and the actual experience of households obtaining food. Access to adequate food at a household level increasingly depends on how food markets and distribution systems function rather than only on total agro food output. Moreover, there is no clear composite measure that defines food security to enable the setting of food security goals and monitoring systems. Food security cannot be understood in isolation from other developmental questions such as sources of income, rural and urban development, changing household structures, health, access to land, water and inputs, retail markets, or education and nutritional knowledge. Livelihood patterns and sustainable asset accumulation along with structural dynamics are increasingly important determinants. South Africa faces a structural household food insecurity problem, the prime causes of which are widespread chronic poverty and unemployment (HSRC 2007). Real solutions to household food insecurity lie in growth and structural change. The future growth and development depends on an inclusive path based on effective human development. Access to sufficient nutritious food and clean water underpins human development.

Several programmes have been introduced in South Africa since 1994 to address the issues of food security. To attain universal physical, social, economic access to sufficient, safe and nutritious food by all South Africans at all times to meet their dietary and food preferences for an active and healthy lifestyle, is supported by the bill of rights in the constitution of the Republic of South Africa Act 108 of 1996. The constitution clearly states that, everyone has the right to have access to sufficient food and water and that the state must take measurable legislative and other measures, within its available resources, to achieve the progressive realization of each of these rights to eradicate hunger, malnutrition and food insecurity is achieved by 2015" (FAO 2006). The Integrated Nutrition Programme (INP) was one of the key strategic health programs to decrease morbidity and mortality rates as well as to prevent and manage malnutrition. The Integrated Food Security Strategy (IFSS) was based on the objectives of increasing household

production and trading, improving income generation and job creation opportunities, improving nutrition and food security and providing capacity building (FAO 2006).

The Comprehensive Agricultural Support Programme (CASP) was an initiative involving a range of government departments and incorporates the Household Food Production programme, which was targeted at those households that fail to access surplus food. CASP also focused on skills and knowledge transfer and financial and marketing advice with the aim to promote wealth through agriculture and improve national and household food security, amongst others (FAO 2006). The Micro Agricultural Finance Initiative of South Africa (MAFISA) was launched in 2005 by the National Department of Agriculture (NDA) and the Development Finance Institution of South Africa (DFI) and was put into operation in 2006. By providing credit to aspiring black farmers and the working poor, it was hoped that the effect would be evident in improved livelihoods, reduced poverty and viable business ventures (FAO 2006). One home, one garden project supplies seed and fertilizer packs to households, provides agricultural training as well as financial advice to cooperatives. The intention is to encourage every household to produce some food for consumption purposes with a long-term goal of producing enough food to sell at local markets (FAO 2006).

Despite the significant roles women play in agriculture and food security in many developing countries, they continue to have a poor command over a range of productive resources, including education, land, information, and financial resources (Odame et al. 2002; Welch et al. 2000; World Bank 2001). While many studies have identified systematic gender productivity differentials, there are few studies that have identified the underlying explanation for them. The novelty of this paper is that it adds to the literature by providing more evidence on the causal mechanisms behind the gender food security differentials. Food security is a multifaceted concept and has been measured using various indicators (Chung et al. 1997). At the household level, food security is defined as sustainable access to sufficient quantity and quality of food to ensure adequate dietary intake and a healthy life for all household members (FAO 1992). Food (in)security has also a tempo-

ral dimension which is defined as transitory when a population suffers from a temporary decline in food consumption and as chronic when a population is continuously unable to acquire sufficient food (Chung et al. 1997). The level of asset endowments of a household will determine different strategies to cope with transitory food insecurity that often involves borrowing money and the sale or consumption of productive assets.

Households most vulnerable to food insecurity generally include those which lack productive assets and depend on irregular income from daily wage labor. Within households, women, girls, elderly, and disabled members are often the victims of discrimination and therefore, more vulnerable. Food security is closely linked to poverty level due to the dimension of food security that deals on affordability. It has generally been considered that female-headed households are more vulnerable to food insecurity, the "triple burden" that results in greater vulnerability for the female-headed households. However, there is no empirical regularity of the simultaneous presence of all three factors. Barros et al. (1997) observe in the context of urban Brazil that the main reason for female-headed households being poor is not a lower number of earners relative to family size but the lower earning power of these earners. Since males earn more than females in the same job, a household lacking male-earned income simply has a much higher probability of being poor. In addition, socio-cultural factors can prohibit women's participation in the labor force. Being "activity burdened," female-headed households employ additional household members including school-going children in income-generating activities. If female-headed households utilize all available resources including existing human capital to survive, then they cannot invest in future human capital formation, thus the likelihood of transmitting poverty to the next generation is higher. There is also a heterogeneity among the female-headed households with different reasons for the female being the household head. For example, Dreze and Srinivasan (1997) find evidence that widow-headed households are more disadvantaged than other types of female-headed households. There are also counter examples that female-headed households are no less food insecure than male-headed households. Quisumbing et al. (2001),

using household survey data set for 10 developing countries, found no statistically significantly higher incidence of poverty among the female-headed households in two-thirds of the countries.

In Eden District of the Western Cape Province, South Africa, the governments have put in place food security programmes aimed at curbing the problem of food insecurity, and help people sustain their lives. However, households seem not to be benefiting. Food problem is one of the characteristics of the developing countries. Poverty and social deprivation, unemployment and job creation especially amongst the youth and serious skills shortages are the characteristics of Eden District of the Western Cape Province. This indicates that while the country may be food secured, a large numbers of rural households within the country are found to be food insecure.

Several factors have been identified by researchers as determining the food security status. Drimie and Mini (2003) reported population growth, unemployment, poor infrastructure political insecurity to affect food security. Mbaya (2003) indicated that lack of access to food affects food security. The Presidency (2008) opined that food security is determined by limited food availability, due mainly to the (under) performance of the agricultural sector. He further states that the key factor contributing to the food insecurity is gender inequality in families, communities and society as a whole. A major factor in recent food security literature is the issue of household head as determining food security. This is predicated on the fact that the type of household headship will determine access to production factors and other variables associated with food security.

Objectives of the Study

The objective of the study was to assess food security among male and female-headed farming households. Specifically, farming households' personal characteristics were identified, level of food security determined, and constraints in achieving food security ascertained. Relationship between socio-economic characteristics and food security status among farming households was explored and difference in the food security status of the male and female-headed households determined.

METHODOLOGY

This study was conducted in Eden district of the Western Cape. Western Cape is one of the provinces of South Africa; its capital is the city of Cape Town. It is positioned on 34 degrees latitude South and 20 degrees longitude East of South Africa. It is bordered on the north by the Northern Cape, on the east by the Eastern Cape, on the south by the Indian Ocean, and on the west by the Atlantic Ocean. The Western Cape province is divided into six district municipalities: The Cape Metropole, Overberg, West Coast, Cape Winelands, Central Karoo and Eden districts Municipalities.

Eden District Municipality is located along the South Eastern coast of the Western Cape Province. It stretches from 350 km along the Indian Ocean Coast, from the Bloukrans River in the East to Witsand and the Breede River mouth in the South. The adjacent municipalities are South Cape Municipality, Western Cape (north), Plettenberg Bay Municipality, Western Cape (east) and George Municipality, Western Cape (west). Eden district is characterised by a myriad of social and economic challenges ranging from poverty and social deprivation, unemployment which is driving people away from the area. Furthermore, job creation and serious skills shortages especially amongst the youth. The shortage of skills results in uncoordinated planning and development in the area (Eden Municipality Report 2007).

The number of households during the time of survey was 215. From this number, 100 were found to be household heads of which 62 were males and 38 were females (Eden Municipality Report 2007). From the list of farming households obtained from the extension officer, 50 percent of each of the male-headed and female-headed households were randomly selected to give 50 household heads as sample size. A structured questionnaire was then designed and implemented to gather information on food security among male and female farming household heads in the Eden district municipality of the Western Cape. The questions were set in English but due to the fact that Afrikaans was the most familiar language used in the study area, an extension official assisted with the translations. Data were analysed with Statistical Package for the Social Sciences, version 18.0 using frequency counts and percentages while Mann-Whitney test to determine if a difference in food security exists among the two groups.

RESULTS AND DISCUSSION

Normally the head of the household is responsible for the co-ordination of the household activities. The percentage distribution of male and female households in Eden district municipality on selected demographic characteristics as presented in Table 1. Of the 50 household heads interviewed, 62 percent of the households were headed by men. In rural areas of South Africa, the male-headed households tend to migrate to the urban areas for wage employment. In their absence wives are left to take many decisions about household matters. Thirty-eight percent of the households in the sample were headed by women. The implication from the survey results is that there is the need to empower women for household food security; their socio-economic conditions play a significant role in food security. The high percentage of male headed families observed in the study suggested that participation of farmers in the study area depends on the perception by the male members of the community.

The other factor that is considered to be crucial in farming is age, since it determines whether the household benefited from the experience of an older person, or has to base its decisions on the attitude of a younger household. The male-headed households in Eden district (42%) were above fifty years of age whereas only 21 percent were female-headed were above fifty years of age. According to Driemie and Mini (2003), age is one of the factors that affect the probability of a farmer being successful in farming; because younger farmers are more ready to adopt modern technology and may be more adaptive and willing than older people to try new methods. The study conducted by the Human Resource Council (2007) indicated that young people are not interested in farming, of which is not the case in the study area.

There is a similar distribution of households along marital status categories. The majority of the household heads are married, 87 percent males and 63 percent females respectively. This may imply that they both (male and female) are responsible to provide food for their household and determine the type of food, quality and quantity to prepare. Another attribute of importance pertains to the level of education attained by the heads of the households, who, normally, are the decision-makers. Education encompasses teaching and

learning specific skills. Low level of education can be a constraint to improvement of agricultural practices. The percentage of households that went up to primary level was 51.6 males and 63.2 females respectively. This implies that farmers in the study area can read and write, further the percentage of those who attended college level was low (16.1% and 15.8%).

A study by Rwigema and Venter (2004) suggests that a sound educational background can reinforce natural talent. It can provide a theoretical foundation for informed decision, they further observed that success in farming requires knowledge of aspects like marketing, purchasing, finance etc. In addition education is likely to improve managerial ability in terms of better formulation and execution of development programmes, and acquiring better information to improve marketing ability. This study suggests that education should go hand in hand with training because the probability of a farmer becoming successful improves when a farmer had some type of vocational training, further such training should continue through extension support. Conversely, while the majority of farmers in Eden have farming experience of 2 – 4 years (77.4% and 89.5 %), there are those who worked for five to ten years (19.4%) but this pertains to only male- headed households.

Table 1 shows the disparity in the study area regarding land size which ranges from one to four hectares. This study shows that in reality, the households have access to very small pieces of land. However the problem of access to land was found to be common in all households. The maximum area found in the study was four hectares and a minimum of one hectare. The results reveal that 90.3 percent of the male households had land area within the range of three – four hectares and only 9.7 percent had 1-2 hectares. On the other hand 78.9 percent of the female headed households own 3 - 4 hectors and 21.9 own 1 - 2 hectares.

Table 1 further indicates that 80 percent males and 79 percent females do not belong to any of the farmers groups such as cooperatives. This might be attributed to the understanding that the government through its programmes assist farmers with farming inputs. Cooperatives were found to be the way to provide a stable place to sell what they grow, to provide a living or sustainable income but it looks like the respondents do not get a competitive and dependable place to sell their crops

Table 1: Percentage distribution of respondents based on selected personal characteristics

Variable	Male (n=31)		Female (n=19)	
	No.	Percent	No.	Percent
<i>Age</i>				
Less than 40	7	22.6	4	21
41 – 50	11	35.5	11	58
Above 50	13	42.	4	21
<i>Marital Status</i>				
Single	4	12.9	3	15.8
Married	27	87.1	12	63.2
Divorced	0	0	4	21.
<i>Education</i>				
Primary	16	51.6	12	63.2
High School	10	32.3	4	21
College	5	16.1	3	15.8
<i>Farm Experience</i>				
Less than 2 years	1	3.2	2	10.5
2 – 4 years	24	77.4	13	68.4
5 – 10 years	6	19.4	4	21.1
<i>Farm Size</i>				
1- 2 hectors	3	9.7	4	21.1
3- 4 hectors	28	90.3	15	78.9
<i>Farmer Group</i>				
Yes	6	19.4	4	21.1
No	25	80.6	15	78.9

or they basically produce for consumption. It is for this reason that only a small percentage are members of the cooperative (19 males and 21 females) respectively. In working through small groups, farmers can reduce the cost of accessing inputs, production technologies, information and markets by sharing these costs amongst all members of the group. For example, by bulk purchasing inputs through groups, farmers obtain bulk sale discounts from suppliers and can share transport costs. Through groups, farmers can open group savings and/or credit accounts offered by financial institutions at reduced individual expense and marketing farmers can share storage, processing, transport and selling costs. Oladele and Mabe (2010) stated that extension officers in North-West Province, South Africa covered at least 3 communities and 3 farmers groups with more than 500 farmers and travelled more than 40 kms. to reach their farmers.

Table 2 presents the difference in food security among male and female- headed households in Eden District Municipality. A significant difference in food security among male and female-headed households was determined. The result showed that a significant difference existed in their food security level ($Z = -2.115$, $p < 0.05$); with higher mean rank for males (28.44) than females (20.71). This further confirms that male- headed

Table 2: Mann-Whitney test showing the level of food security among male and female-headed farming households

Variable	Groups	No.	Mean rank	Sum of rank	MWU	WW	Z	P
Food security	Male headed	31	28.44	881.50	203.500	393.500	-2.115	.034
	Female headed	19	20.71	393.50				
Total		50						

MWU- Mann-Whitney U test; WW –Wilcoxon test

households were more food secured than female-headed households. This may be attributed to bias in resource ownership and allocation among men and women. Quisumbing et al. (2001) reported higher incidence of poverty among the female-headed households in developing countries.

Table 3 provides information regarding the output of Mann-Whitney U test on constraints. It shows the mean rank and the sum of ranks of the two groups tested. The table indicates the difference in the constraints to food security among farming households (male and female headed farming households). This was based on the fact that household food security is gender sensitive. Eleven constraints were hypothesised to influence the level of food security and hence household level food security to discriminate

between male and female headed households. Significant differences exist between male and female-headed households in terms of constraints faced by farming households. These are lack of information, harsh weather, and wild animals damaging crops, farm pilfering and diseases.

CONCLUSION

The study reveals that food insecurity is higher in female-headed households than in their male counterparts partly due to uneven distribution of resources. The farming households are dependent on a narrow livelihood base since most of them consume a larger proportion of their farm produce at household level. A large number of the respondents education. Lack of access to credit

Table 3: Mann-Whitney test showing the socio-economic constraints to food security among male and female headed households

Constraints	Groups	No.	Mean rank	Sum of rank	MWU	WW	Z	P
Poor Storage Facilities	Male headed	31	26.32	816.00	269.000	459.000	-.590	.555
	Female headed	19	24.16	459.00				
Poor Market for Produce	Male headed	31	24.77	830.00	255.000	445.000	-.942	.346
	Female headed	19	23.42	445.00				
Lack of Information on Agricultural Lack of Credit	Male headed	31	30.56	947.50	137.5000	327.500	-3.457	.001
	Female headed	19	17.24	327.50				
Land Tenure Systems	Male headed	31	27.03	838.00	247.000	437.000	-1.824	.068
	Female headed	19	23.00	437.00				
Harsh Weather	Male headed	31	25.50	790.50	294.500	484.500	.000	1.000
	Female headed	19	25.50	484.50				
Wild Animals Damaging Crops	Male headed	31	32.47	1006.50	78.500	268.500	-4.654	.000
	Female headed	19	14.13	268.50				
Crime Farm Pilfering	Male headed	31	27.34	909.50	17.500	365.500	-3.047	.002
	Female headed	19	19.24	365.50				
Poor Access to Farming Inputs Diseases	Male headed	31	29.19	905.00	180.000	370.000	-3.438	.001
	Female headed	19	19.47	370.00				
Poor Soil Fertility	Male headed	31	26.63	825.50	259.5000	449.500	-.761	.446
	Female headed	19	23.66	449.50				
	Male headed	31	50.53	946.50	138.500	328.500	-3.543	.000
	Female headed	19	17.29	328.50				
	Male headed	31	24.55	755.00	259.000	755.000	-.833	.377
	Female headed	19	27.37	520.00				

and small piece of land were impediments to food security perceived as detrimental to household food security by sampled households because they hinder domestic production. The study revealed that farmers do not keep records of their farm practices and hence no indication of their farm income. It was observed from this study that most of the households are not taking part in farmer groups. The formation of farmers groups to create awareness as way forward to enhance the farmers' performance is recommended. Programmes that increase access of food insecure households and communities to resources such as land, environmental sustainable technologies, credit, training and markets should be introduced.

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