

Influence of access to Microfinance Credit by Women on Household Food Consumption Patterns in an Urban Low Income Setting in Nairobi, Kenya

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ABSTRACT

The purpose of this study was to assess the effect of access to microfinance credit by women entrepreneurs on household food security in three urban low income areas in Nairobi, Kenya. A total of 787 respondents comprising of 337 Microfinance Institution (MFI) clients and 450 non clients participated in this study. A structured pretested questionnaire was used to interview respondents in both groups. Households of microfinance clients consumed more diverse diets compared to those of non clients, reflected in the dietary diversity scores for the two study groups which were significantly different ($P < 0.01$). Findings of the study showed that overall, households of microfinance clients consumed more nutritious and diverse diets compared to those of non clients. Participation in microfinance programmes led to improved food security in households of clients. The study provides evidence that access to microfinance credit influences household food consumption patterns positively in urban low income areas.

KEY WORDS: Microfinance, Women, Food Security, Urban areas.

INTRODUCTION

Household food security in urban areas is dependent on ability of individuals or households to afford food which in turn, is dependent on wages earned and food prices This dependence on cash income has been identified as a key constraint to attainment of food security in urban households of the developing world due to rapid urbanisation and widespread unemployment (Haddad, 1999). Like many other Sub-Sahara African countries, Kenya has experienced high rates of urbanisation in recent decades in the midst of declining economic growth. This has led to limited growth in employment opportunities in the face of rapid labour force growth (GOK, 2008). The resultant high levels of unemployment and attendant poverty which are particularly severe in urban areas have led to increasing numbers of people seeking their livelihood in the informal sector (GOK, 2003). Consequently, the Small and Micro Enterprise (SME) sector has grown rapidly over the last two decades and provides employment to the majority of entrepreneurs in both urban and rural areas in Kenya. Majority of women in the labour market in Kenya are in the informal sector running SMEs where they account for

49 percent of entrepreneurs (GOK, 2003). Increasing participation of women in the running of small enterprises and the accessing of microfinance credit to improve their businesses is expected to improve their family's welfare as well as their social and economic status (Mosley, 2004).

A growing body of evidence shows that increasing resources in the hands of women has greater impacts on family welfare, in particular improvements in child survival, health, food consumption, hygiene and educational standards for families and societies (Johnson 2004; Mayoux, 1999; Duflo, 2005). Increasing women's employment through access to microfinance credit is therefore regarded as one way of stimulating access to wider social benefits since they are more likely (than men) to invest in household welfare (Goetz et al. 1996; Khandker, 2003). The provision of financial services for women entrepreneurs has therefore become a component of many microfinance programmes because supporting the entrepreneurship of women is seen as having important "trickledown" effects on wider poverty alleviation and gender inequality (Pitt et al, 2006; Topalova, 2005; Mknelly 1998).

Improved income generation is one of the pathways through which microfinance services are presumed to affect household food security. It is widely assumed that access to microfinance credit leads to increased productivity of women's enterprises. Higher incomes realised may in turn lead to improved access to more adequate and better quality diets. Increased income from women's income generating activities can however only be realised if businesses are able to continuously raise sufficient income to service the loans, make the compulsory weekly savings and realise profits. The income from the business can then be used to improve quantity and quality of food consumed in the household. Moreover, evidence shows that income earned by women only translates to improved household welfare if women control the income earned (Mayoux, 1999; Duflo, 2005). In a study conducted in Bolivia among women involved in microcredit schemes, women's control of household resources was associated with improvements in quantity and quality of food available to young children (KWFT, 2002). Studies on the effect of access to microfinance credit to women on household food security in various setups have however yielded mixed findings.

A study conducted by a Kenyan microfinance institution that targets women exclusively (Kenya Women's Finance Trust) compared programme impacts on new and old loan clients in urban and rural areas (Rita, 2010). Findings showed that 60 percent of families who had received more than four loans could afford meat or chicken three – four more times per week compared to 42 percent of the new clients in the institution. A cross-sectional study in Peru by Rita and Fernald (Meyer, 2001) among female clients found that longer microcredit participation was associated with better nutritional status of women and household food security. This is similar to findings of a study in India which concluded that microfinance can contribute to poverty alleviation and food security through enhanced investment which contributes to consumption smoothing [Brannen, 2010).

These findings however contrasts with those of two studies that evaluated the impact on food security and nutrition from a combined micro-savings and microcredit programme in Tanzania (Doocey et al, 2005), and a credit-only programme in Ethiopia (Nanoor, 2008) which showed no effect on meal quantity among participants. Further, analysis of data from Ethiopia indicated that female client households were more successful in maintaining quality diets than households of male clients or community controls (Johnson, 2004). A study in Ghana (Foote et al, 2004) also showed little significant difference in household diet and food security between participants and non participants.

This study sought to compare food consumption patterns in households of women with microfinance credit and those without. The current study compared food consumption patterns in households of business women with MFI credit in an urban low income set up with that of their counterparts who had never accessed formal credit.

METHODOLOGY

The study was conducted in three purposively selected low-income estates located in the peri-urban East-lands area of Nairobi – Huruma, Kariobangi and Mathare North estates. These were selected because they were the areas where the three collaborating microfinance institutions had the largest number of female clients in Nairobi. The study used a cross-sectional evaluation design that compared clients of microfinance programmes to a sample of non clients who comprised of business women who had never taken formal credit as a comparative group. The women with microfinance loans were recruited from three microfinance institutions that were operational in the study areas namely Faulu Kenya, Kenya Women’s Finance Trust and Pride Africa.

All eligible consenting women with a loan from the three MFIs who were resident in the study areas were purposively selected and enrolled for the study. A random sample of consenting business women without MFI loans, which was the study comparison group, was recruited from the three study sites. The survey covered a total of 787 respondents comprising of 337 MFI clients and 450 non clients.

A structured pretested questionnaire was used to gather information used to compare the two groups in terms of household food consumption patterns. Variables measured on food consumption patterns and adequacy of diets consumed in study households included 24 hour dietary recall, 7 day food frequency, sources of food, household expenditure on food, coping strategies when financially constrained and respondents perceptions on adequacy of food consumed by the household. Using a food frequency schedule, different foods purchased a week prior to the survey and the ones consumed by the whole household the previous day were documented. The food items consumed were entered into food groups according to nutrient composition. The categories were animal proteins, dairy products, cereals, legumes and nuts, roots and tubers, vegetables, fruits, and fats and oils. were assessed. Data on household food expenditure and coping strategies employed to obtain food when households experienced financial constraints were assessed. Focus group discussions were held with MFI clients to assess perceptions on influence of credit and income earned on household food consumption patterns.

Ethical clearance to conduct the study was obtained from the Kenyatta National Hospital and University of Nairobi research ethics committee and a research permit obtained from the Ministry of Education, Science and Technology. Written consent was also obtained from the collaborating microfinance institutions – Kenya Women’s Finance Trust (KWFT), Pride Africa and Faulu Kenya. All study respondents gave consent to participate in the study.

Statistical analysis

To compare food consumption patterns and adequacy of diets consumed between the two groups, data from the 24-hour recall and 7 day food frequency schedules was analysed. The food items consumed 24 hours prior to the study were entered and classified into eight food groups (meats, dairy products, cereals, legumes, roots and tubers, fruits, vegetable, and oils and fats). The number of different foods consumed (dietary diversity) was analysed from the 24-hour dietary recall data. A food diversity score ranging from 0–8 was computed for both groups. This was derived from the total tally of food group scores per household which was then compared for the two groups. A score of 5 and above indicated an adequately varied diet with respect to the eight food groups used. Frequency in consumption of foods from the various groups was analysed and compared between the two

groups. Other food consumption variables analysed were household expenditure on food, sources of food, coping strategies when financially constrained, women's perceptions on adequacy of food consumed by the household, main person responsible for purchase of food in the household and sources of credit for food (when necessary).

RESULTS

Household food access and coping strategies

Food access is attained when individuals or households have adequate income or other resources to purchase appropriate food needed to maintain consumption of an adequately nutritious diet. In this study, respondents were asked to provide an estimate of the amount of money spent on food during the previous week. Households of MFI clients had on average spent significantly more ($P=0.002$) money on food Ksh 1,665 \pm 850 compared to non clients who had spent an average of Ksh 1,410 \pm 820. Findings revealed that majority of women in both groups (75 percent) took responsibility for procurement of food for the households.

Strategies used in meeting household food needs when there were financial constraints in the household were explored. Taking food on credit was cited as a coping strategy by 37 percent of respondents in both groups. Households of non clients (40 percent) were more likely to take foodstuffs on credit compared to those of clients (34 percent) when faced with financial constraints. Findings from focus group discussions revealed that women adjusted the type of food consumed at household level when there were financial constraints. Rather than take food on credit, some women stopped buying foods considered 'luxury' foods such as fruits, meat and milk. A second approach cited in dealing with financial constraints was purchasing small amounts of these 'luxury foods' only for young children in the household.

Consumption of cooked street foods emerged as an important source of food consumed in study households. There was however a significant difference ($P < 0.001$) in consumption of street foods between households of clients compared to those of non clients. Only 27 percent of MFI clients compared to 73 percent of non clients reported consuming street foods. Reasons for consumption of street foods included cheaper (40 percent), time saving in preparation (33 percent) and convenient to use since they are pre-cooked (19 percent). Other reasons mentioned accounted for 8 percent.

Frequency in food consumption based on seven day food frequency schedule

Respondents were asked for the usual frequency with which foods in the eight food groups were consumed per week. There was a significant difference in reported frequency of consumption of meat ($P=0.01$), dairy products ($P=0.00$) and vegetables ($P=0.01$) between the two groups. **Animal protein:** Significantly more ($P=0.01$) households of clients (27 percent) reported consuming animal based protein items on a daily basis compared to households of non clients (19 percent). Overall, 40 percent of households from both groups reported consuming animal protein food items for 2–3 times per week. **Dairy products:** Significantly more ($P=0.00$) households of clients (77 percent) reported consuming dairy products an average of 2–3 times per day compared to 23 percent of their counterparts. Milk was widely used as a constituent of tea or coffee drinks. **Cereals:** Consumption patterns of cereal based foods were largely similar between the two types of households. Majority of households from both groups (76 percent) consumed cereal products daily. **Vegetables:** There was a significant difference ($P=0.01$) between the two categories of households in consumption of vegetables with more households of non clients (59 percent) reportedly consuming vegetables on a daily basis compared to 41 percent among their counterparts with loans. **Legumes, roots and tubers:** Respondents from both groups reported consuming

legumes either once (37 percent) or twice (41 percent) in a week. Similarly, starchy roots and tubers were on average consumed once (33 percent) or twice (34 percent) in a week. There was however no difference between the two groups in terms of consumption of legumes, roots and tubers. **Fruits:** Frequency in consumption of fruits among the two groups was largely similar. Close to two-thirds of households (64 percent) reported consuming fruits on a daily basis. A smaller proportion of households of non clients (19 percent) and 11 percent of MFI clients respectively said they ate fruits once or twice per week.

Food consumption based on 24-hour dietary recall

Using the 24-hour recall method, foods consumed in households of clients and non clients were assessed and compared. The most commonly consumed foods in both types of households were cereals, vegetables and energy rich foods such as fats and oils (Table 1). A large proportion of households in both groups (94 percent) had consumed a cereal based food such as bread, buns, cakes, rice or maize meal ugali. Vegetables such as kales, carrots, tomatoes and spinach were consumed in 95 percent of households. An equally large number of households in both groups (99 percent) had consumed energy dense foods including fats and oils used in frying foods.

There were significant differences in the proportion of households consuming animal protein foods and fruits between the two groups. Significantly ($P \leq 0.01$) more households of clients (71 percent) compared to those of non clients (54 percent) had consumed animal protein foods. The animal based foods most frequently consumed in this category were beef, tripe or offals and eggs. Significantly ($P=0.01$) more households of clients (84 percent) compared to those of non clients (77 percent) reported having consumed fruits. A significantly ($P=0.006$) larger proportion of non clients households (56 percent) had consumed milk or milk products compared to those of clients (44 percent).

The least consumed foods by both groups were legumes, dairy products as well as starchy roots. Only 43 percent of client's households and 39 percent of non clients reported having consumed any type of legumes. Slightly over half of both households (55 percent) of clients compared to 53 percent of non clients had consumed foods in the category of roots and tubers. These differences were however not significant.

Table 1: Distribution of study households by food consumption

Foodstuffs	MFI (n=339) %	Non MFI (n=448) %	X ²
Animal proteins	71	54	23.4**
Dairy products	44	56	6.7**
Legumes	43	39	0.69
Cereals	94	94	0.15
Roots and tubers	55	53	0.17
Vegetables	95	93	0.98
Fruits	84	77	5.4*
Fats and oils	99	99	0.60

*P-value <0.05 (using chi-square and df=1 in all the cases) **P-value <0.005 (using chi-square and df=1 in all the cases)

Food diversity score

The number of different foods or food groups consumed in a household provides a measure of the quality of the diet by reflecting dietary diversity. As a food security indicator, dietary diversity is usually highly correlated with factors such as caloric and protein adequacy, percentage of protein from animal sources (high quality protein) and household income. To accurately capture dietary diversity, the variety of food groups consumed is evaluated. The set of food groups used in this study (Table 2) was adapted from that used by FAO to reflect dietary and economic patterns in food selection in the study households.

Table 2: Classification of foods commonly consumed in study areas

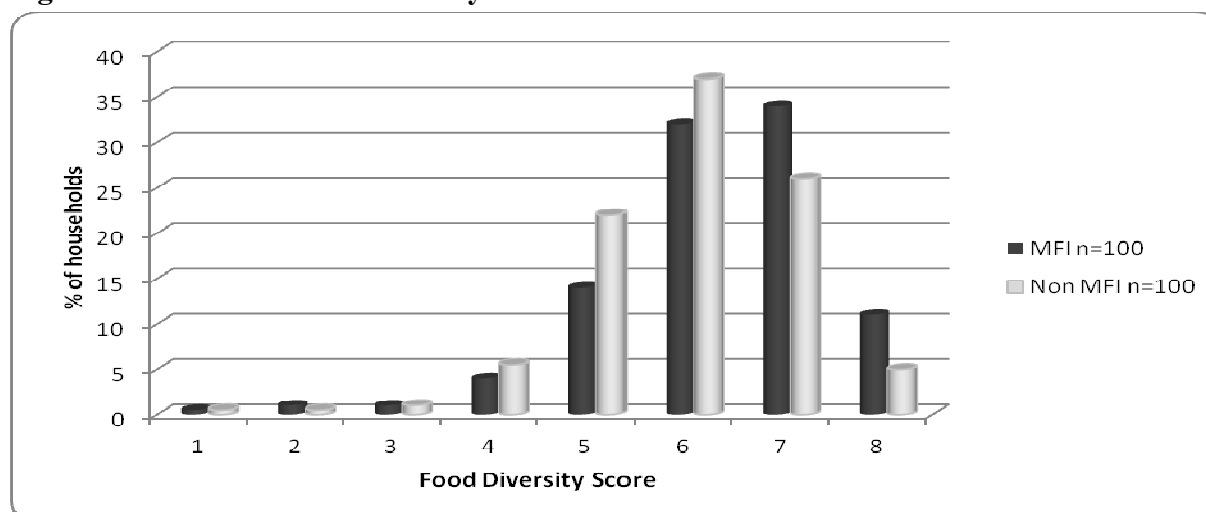
Category of food	Examples of foods
Animal foods	Beef, mutton, goat meat, chicken, offals, pork, fish, eggs
Dairy products	Fresh milk, yoghurt
Legumes	Beans, pigeon peas, green grams, peas
Cereals	Rice, chapati, ugali, bread/scones, doughnuts
Vegetables	Carrots, tomatoes, kales, cabbages, spinach
Fruits	Mangoes, pawpaws, oranges, ripe bananas
Fats and oils	Cooking oils or fat, margarine
Starchy tubers	English potatoes, sweet potatoes, cassava, yams

Source: Author

A household Food Diversity Score (FDS) was computed for both study groups. The score (Figure 1) was computed from the 24-hour dietary recall and the food classification table. Food items consumed 24 hours prior to the study were classified according to the eight food groups that is, meats, dairy products, cereals, legumes and nuts, starchy roots, vegetables, fruits and fats. FDS was then derived from the total tally of food group score per household. The Food Diversity Score ranging from 0–8 expressed the number of different food groups in a household's diet. A score of 5 and above indicated an adequate varied diet with respect to the food categories stated above.

The FDSs for the two study groups were significantly different ($P < 0.01$). The scores for households of MFI clients ranged from 2–8 with a mean score of 6.1 ± 1.1 . Scores of households of non clients ranged from 1–8 with a mean score of 5.2 ± 1.1 . Results indicate that most households (94 percent and 88 percent of clients and non clients, respectively), had eaten foods from at least six of the eight food groups.

Figure 1: Household food diversity score

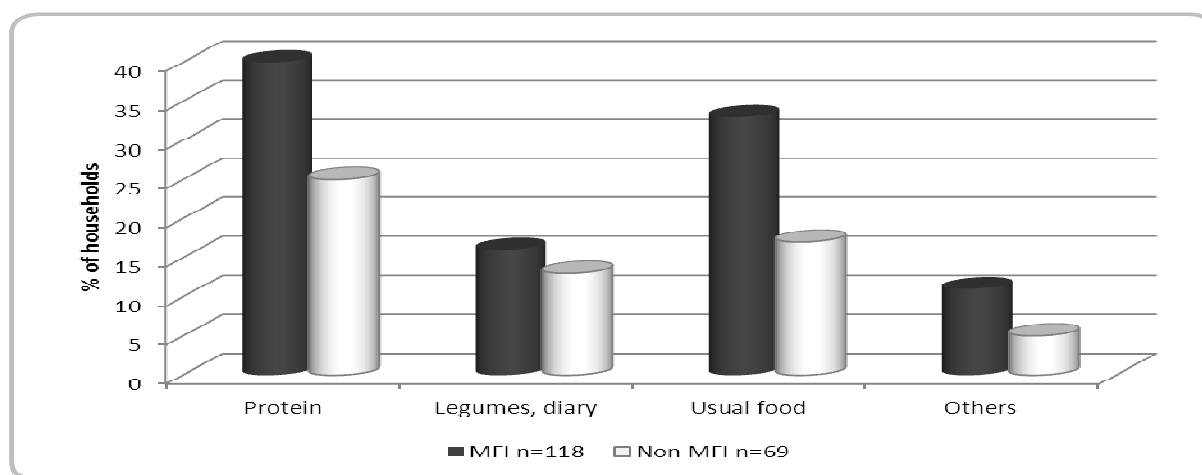


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Perceived influence of access to MFI credit on household food consumption

MFI client's perspectives on how taking a loan had affected household food consumption were assessed. Of the MFI clients who said there were changes in household food consumption, 60 percent reported improvements in overall household food consumption while 40 percent said food consumption had gotten worse. Significantly ($P = 0.04$) more MFI clients (62 percent) reported eating better compared to their counterparts without loans (36 percent). Women who reported an improvement in household food consumption were asked to mention the main aspects in which household food consumption had improved (Figure 2).

Figure 2: Improvements in household food consumption



The main form of improvement in dietary intake cited by both groups (65 percent) was an increase in intake of protein foods followed by an increase in intake of the usual foods (50 percent) consumed in the household. A higher proportion of MFI clients (40 percent) compared to non clients (25 percent) said they consumed more of animal proteins, while 50 percent of all respondents said they had increased intake of the usual type of food consumed.

Thirty-three percent of MFI clients said they consumed more of the usual types of food compared to seventeen percent of non clients. Sixteen percent of MFI clients compared to thirteen percent of non clients cited improvements related to increased intake of legumes, vegetables and dairy products.

DISCUSSION

Household food consumption patterns

Nutritional well-being of families is closely linked with the economic status of women. Subsequently, various studies have underscored the importance of improving women's access and control of resources as it is key to achievement of better welfare outcomes in food, nutrition, education and the health status of children and their families (FAO, 2008). Studies show that women the world over assume primary responsibility for purchasing what families consume. Findings of this study showed that women in both groups were primarily responsible for acquisition of food eaten in the household.

Household food security is a sensitive measure of household well-being, and food is an important component of household budgets. The variety of food consumed, especially foods rich in animal protein and the frequency with which these are consumed is an indicator of economic status of a household. The underlying assumption among development partners and microfinance institutions is that access to credit by women leads to increased income, which in turn leads to improved household welfare including access to better diets. This study investigated the influence of access to microfinance credit on household food consumption patterns by comparing food consumption in households of women with MFI credit and those without.

Based on general perception, two-thirds of MFI clients reported that the pattern of household food consumption had not changed after taking a loan. During focus group discussions, discussants from the three MFIs explained that women with loans had to exercise utmost financial discipline because of the stringent conditions requiring MFI clients to make weekly loan repayments and compulsory savings. This coupled with the fluctuating performance of businesses especially during the first three loan cycles left clients with little expendable income.

Coping strategies in acquisition of food

Low income households in urban areas utilise a variety of coping mechanisms to enable them survive, improve their welfare, and obtain food. This is because typically, these households have a large number of competing needs for limited funds especially for fixed household expenses such as school fees, house rent, water, electricity, microfinance loan payments and compulsory savings, against uneven and uncertain income. This inevitably means that available income has to be actively managed to meet expenses. Given these multiple fixed expenses, the food budget is frequently seen as one of the few places for flexibility in quantity, quality and frequency of consumption. Doocey et al (2005) in a study about coping mechanisms with regard to food acquisition in Ethiopia found few significant differences in the use of coping mechanisms between established clients, incoming clients and community controls.

Findings of this study showed that the two groups used different coping strategies when faced with financial constraints. MFI clients coped by ‘dropping’ certain foods from the menu or buying cheaper types of food. This may be attributed to the fear of accumulated debt in addition to regular MFI debt that has to be re-paid weekly. Non clients resorted to taking food on credit from local vendors. Consumption of street foods emerged as a strategy used by households of both clients and non clients.

Consumption of street foods or non-home prepared foods is a strategy employed by urban low and middle income households in accessing food. These are ready-to-eat foods and beverages, sold at stationary locations or by mobile vendors in streets and open places as opposed to stores and licensed establishments. They are the major source of non-home prepared foods for poor and middle income urban residents. Street food vending and consumption in Nairobi has developed and rapidly increased during the last three decades. It has been instigated by rapidly growing and changing urban food demands in the face of declining real incomes. The convenience of street foods is linked to women’s opportunity cost of time as well as the affordability of the foods.

Dietary diversity

The number of different foods or food groups consumed in a household reflects the economic ability of a household to consume a variety of foods (FAO, 2008). Studies have shown that an increase in dietary diversity is associated with improved socio-economic status and household food security measured as household energy and protein availability (Hatloy, 2000; Foote et al, 2004). Dietary diversity scores which are reflective of the

variety of foods consumed in a household have also been positively correlated with micronutrient adequacy of the diet (Lacalle, 2008).

Diets in households of the two groups were significantly different. Household dietary diversity scores computed from the 24-hour dietary recall for the two groups showed that overall, households of clients consumed significantly more nutritious and diverse diets compared to those without loans. This is not surprising given the average earnings of MFI clients which were significantly higher than for non clients. It reflects the benefits accruing to families when women independently earn income which they have control over. These findings concur with some studies on impact of microfinance on household food security and nutrition in Sub-Saharan Africa.

Findings of some of the studies reviewed found that microfinance has a positive impact on food security and nutrition, although this was not true across the board. Evidence from Tanzania (Nanoor, 2008) and Rwanda (Barnes, 2001), showed that participation in a savings and credit association and the red cross credit programme, respectively, was associated with a significant positive increase in meal quality, an increase in consumption of meat in both countries and fish in Tanzania. In Zimbabwe, participation in the Zambuko Trust had a positive impact on consumption of nutritious food (meat, chicken, fish or milk) in poor client households compared to non clients and those who had left the programme (Dupas, 2008). Findings of a randomised control trial on micro-savings in Kenya suggested that the increased food quality is due to increased expenditure on food, which increased significantly for client women (Dupas, 2008). This is further supported by data from Malawi, which showed that access to credit of adult female household members improved 0–6 year old girls' height for-age (Shimamura, 2009).

CONCLUSION

Households of microfinance clients overall consumed more nutritious and diverse diets compared to those of non clients. Participation in microfinance programmes appears to have led to improved food security in households of clients. This resulted from improved earnings from client's enterprises, coupled with the fact that women had control over use of loan funds. This confirms the hypothesis that participation by women in microfinance programmes in urban areas contributes to improved diets in households of female clients.

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