The Potential Contribution of Senior Citizens’ Grant (SCG) Towards Nutrition Outcomes in Older Persons’ Households in Uganda

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Abstract. The Senior Citizens’ Grant (SCG) is a major social protection intervention in Uganda aimed at reducing income poverty, facilitating access to social services, building a foundation for productive livelihoods, and enabling older persons to live a life of security and dignity. This study sought to generate evidence on the contribution of the SCG towards nutrition outcomes among older persons’ households in Uganda. A cross-sectional and mixed methods study design that employed both qualitative and quantitative approaches were used. The study found out that children in older persons households consumed only 2.16±0.67 meals a day; 50% of the households were severely food insecure; mean dietary diversity Scores for children was 11.0±6.40 and 9.3% of children 6-59 months were wasted. Study findings indicated that SCG did not contribute to household food security. In future, nutrition objectives should explicitly be included in the design of social protection programmes, using a multi-sectoral approach.

1. Introduction

Uganda’s high poverty and vulnerability levels, the worrying demographic patterns and the lack of income security for majority of older persons were key motivating factors for the introduction of the Senior Citizens’ Grant (SCG) which is a major social protection intervention aimed at directly reducing income poverty and supporting senior citizens to access social services.

There is a dearth of information on the nutrition status of children in the care of older persons in Uganda, where the elderly constitutes 3.7% of the country’s population [1] and yet evidence suggests that vulnerability (age and health) exposes older persons and their household members to risks of malnutrition. This paper therefore, examines the potential contribution of the SCG to the nutrition outcomes of older person’s households in a selected district of Uganda.

2. Methodology

2.1. Specific Objectives

a. Assess the nutritional status of children under 5 years in senior citizen’s households.

b. Assess the potential contribution of the SCG on nutritional outcomes of children (6-59 months) living in older persons/beneficiaries’ households.

c. Recommend feasible options and strategies for attaining optimal nutritional outcomes among the target children and older persons in the Social Assistance Grants for Empowerment (SAGE) households.
2.2. Study design
This study employed a cross-sectional design using qualitative and quantitative methods of data collection and analysis [2], [3], [4]. Data were collected from 483 households in SAGE and non-SAGE districts.

3. Results and Discussion
3.1. Household Food Environment

Meal Frequency
Meal frequency is a proxy for caloric intake at individual level [5]. As shown in Table 1, the average number of meals (2.16±0.67) in the surveyed households was below the recommended 3-5 meals a day. Consuming at least (3-5) meals is important for dietary diversity hence, ensuring adequate caloric and nutrient intake at households.

| Program rollout     | N   | Mean          |
|---------------------|-----|---------------|
| Pilot               | 275 | 2.17± (0.65)  |
| Immediate rollout   | 187 | 2.05± (0.72)  |
| Non-SAGE            | 152 | 2.29± (0.59)  |
| Total               | 614 | 2.16± (0.67)  |

To assess the household food environment, the Household Food Insecurity Access Score (HFIAS) was used to estimate the prevalence of food insecurity in the surveyed household (see Figure 1) [5]. The mean HFAIS score (11.0±6.40), showed that households had challenges with food access 30 days prior to the study. As low as 5% of the surveyed older persons’ households were food secure and over 50% were severely food insecure, 16.1% were mildly food insecure while 37.1% were moderately food insecure. By programme rollout, households in the pilot were severely food insecure (62.8%), 56% in the immediate rollout and 45.5% in the non-SAGE.

![Figure 1. Food insecurity in older persons’ households across programme rollout](image)

3.2. Nutrition Outcomes of Children Living in Elderly Persons Households
3.2.1. Prevalence of Wasting
Figure 2 shows the prevalence of wasting (Weight for Height age) among the children in the study population. Global acute malnutrition (GAM) was 14.2%, moderate acute. Malnutrition (MAM) 4.9% and Severe Acute Malnutrition (SAM) was 9.3% among children 6-59 months. This prevalence was higher than the national average of 4% reported from the 2016 Uganda Demographic and Health Survey (UDHS) [6].
3.2.2 Prevalence of Stunting

Figure 3 shows the prevalence of chronic malnutrition (stunting) among children 6-59 months in the study population. As shown, the prevalence of stunting in pilot is high in comparison to immediate roll-out and non-SAGE. Overall, the prevalence of chronic malnutrition (stunting) was high (9.8%) for the surveyed districts.

3.2.3 Dietary Diversity among Children 6-59 Months

Table 2. Individual dietary diversity (IDDS) for children

| Dietary Diversity | Pilot        | Immediate Rollout | Non-SAGE    |
|-------------------|--------------|-------------------|-------------|
| N=77              | N=64         | N=50              |
| Children with DDS <4 | 37 (48.1)  | 24 (37.5)         | 23 (46.0)   |
| Children with DDS >4 | 40 (51.9)  | 40 (62.5)         | 27 (54.0)   |
| Mean IDDS         | 3.44         | 3.73              | 3.20        |
| Children with DDS <4 | 84 (44.0)  |                   |             |
| Children with DDS >4 | 107 (56.0) |                   |             |
| Overall Mean IDDS | 3.48         |                   |             |

Table 2 shows the Individual Dietary Diversity scores of children 6-59 months disaggregated by domains of analysis. The percentage of children consuming food from less than 4 food groups in the 24 hours prior to data collection was 48.1% in the Pilot districts, 37.5% in the Immediate rollout and 46% in the Non-SAGE districts. This indicates that more children from beneficiary households consumed more diverse diets than those from Non-SAGE households. Additionally, the mean IDDS in all domains of analysis, was below four food groups with children in the immediate rollout districts having the highest IDDS mean score of 3.73.
3.3. Contribution of SCG to Nutrition Outcomes

3.3.1. Contribution Based on Comparison of Nutrition Indicators of Households in Pilot, Immediate Roll-Out and Non-SAGE Districts

Looking at dietary diversity, although not significant (p>0.05), more children in the pilot districts (48.1%) consumed food from less than four of the recommended seven food groups in the 24 hours preceding the survey in comparison to the Immediate (37.5%) and Non-SAGE (46.0%) districts. This shows that the SCG has minimal influence on dietary diversity of younger children in older persons’ households and thus did not significantly contribute to the nutrition outcomes as reflected above.

This result may be explained by the fact that most of the households selected for the pilot phase of the SCG in 2011 were from more vulnerable districts than those selected in the immediate roll-out phase and those in the Non-SAGE districts.

3.3.2. Contribution Based on Changes in Nutrition Outcomes in 2012, 2013 and 2019 in Pilot and Immediate Rollout Districts

As shown in table 3, there was no significant difference in Height for Age z-scores (stunting) and Weight for Age (underweight) z-scores between the 2012, when the SCG programme started to 2013 through to 2019 when the recent data was collected [7]. This is possibly due to the nature and factors that determine stunting and underweight, as both depict chronic malnutrition [8]. Changes in these indicators can only be detected over a long period since they manifest over time among children. A significant difference was however observed in the mean differences for Weight for Height z-scores (wasting) between pilot 2012 and 2013 (p=0.000). Wasting is an indicator for acute malnutrition [8] and therefore changes in consumption may after a short period reflect changes in Weight for Height z-scores. It could not be confirmed that this significant change in Weight for Height z-scores is related to the SCG since consumption data for this period is not available. However, previous SCG study reports indicate that SCG beneficiaries used a large fraction of the SCG funds received to purchase food during this period. As such, the contribution of the SCG due to this change can only be assumed.

Table 3. Changes in nutrition outcomes of children overtime

| Phase          | HFA Mean diff | Sig | WFA Mean diff | Sig | WFH Mean diff | Sig |
|----------------|---------------|-----|---------------|-----|---------------|-----|
| Pilot 2012     | -3.803        | 1.000 | -0.065        | 1.000 | -2.679*       | 0.000 |
| Pilot 2013     | -1.021        | 1.000 | -0.477        | 1.000 | 0.408         | 1.000 |
| Imm 2019       | -1.188        | 1.000 | -0.705        | 0.948 | 0.204         | 1.000 |
| Pilot 2013     | 3.830         | 1.000 | 0.065         | 1.000 | 2.679*        | 0.000 |
| Pilot 2019     | 2.809         | 1.000 | -0.412        | 1.000 | 3.087         | 0.357 |
| Imm 2019       | 2.642         | 1.000 | -0.640        | 1.000 | 2.883         | 0.482 |
| Pilot 2019     | 1.021         | 1.000 | 0.477         | 1.000 | -0.408        | 1.000 |
| Pilot 2013     | -2.809        | 1.000 | 0.412         | 1.000 | -3.087        | 0.357 |
| Imm 2019       | -0.167        | 1.000 | -0.228        | 1.000 | -0.204        | 1.000 |
| Pilot 2019     | 1.188         | 1.000 | 0.705         | 0.948 | -0.204        | 1.000 |
| Pilot 2013     | -2.642        | 1.000 | 0.640         | 1.000 | -2.883        | 0.482 |
| Imm roll-out   | 0.167         | 1.000 | 0.228         | 1.000 | 0.204         | 1.000 |

*indicates significance at 0.05

3.3.3. Contribution Based on Changes in Household Food Security in 2012, 2013 and 2019 in Pilot and Immediate roll-out Districts

Table 4 depicts changes in the household food security scores between 2012 and 2019 in the Pilot and Immediate roll-out districts. As shown, the percentage of households in the Pilot districts that did not experience hunger in 2012 when the project had just started was more (45.4%) than those that currently experience little or no hunger (14.3%). In addition, severe hunger was more prevalent (62.8%) in 2019 than it was in 2012 (3.4%). Similarly, in the immediate roll-out districts, the number of households with little or no hunger was less (6.4%) than those with severe hunger (56.0%). The
high numbers if households experiencing hunger in 2019 may be explained through seasonality. Data was collected during a period of food scarcity (January 2019) country wide thus, the significant increase in households facing severe hunger in comparison to the previous years.

| Hunger Scale                          | Time Period |
|--------------------------------------|-------------|
|                                      | Pilot 2012  | Pilot 2013 | Pilot 2014 | Pilot 2019 | Immediate 2019 |
| Little or no hunger in the household | 45.4        | 59.1       | 62.1       | 14.3       | 6.4             |
| Moderate hunger in the household     | 51.2        | 39.0       | 36.0       | 22.9       | 37.6            |
| Severe hunger in the household       | 3.4         | 1.8        | 2.0        | 62.8       | 56.0            |

4. Conclusions

Survey findings showed that 4 out of every 10 children from the Pilot, Immediate rollout and Non-SAGE districts consumed from four and more food groups a day prior to the survey, implying that less than half of the sampled children consumed food from the minimum number of food groups required to contribute to improved nutrition outcomes. As the SCG is rolled out into other districts, efforts need to be made to ensure that there is an increase in the number of food groups from which food is consumed.

Survey results further revealed low consumption of animal source protein such as meat, dairy and eggs. This was evidently seen in the Pilot and Immediate rollout districts but more so in the non-SAGE districts, a case in point of 0% consumption of eggs. Interventions aimed at increasing consumption of these vital nutrients such as promotion of nutrition sensitive agricultural enterprises like raring of small livestock and chickens should be emphasized by the programme especially in areas of active implementation, in order to improve the consumption of animal source foods. In addition, promotion of cheaper high biological value protein sources like silver fish and insects might have positive implications on dietary diversity.

Anthropometry revealed wasting at 14.2% among the sampled children 6-59 months. This result is higher than the 4% wasting reported in the 2016 recent UDHS [6]. Wasting is an indicator for undernutrition occurring in the most recent period and it should be addressed using both long and short-term interventions to prevent hunger at households and in the community. The prevalence of chronic malnutrition was high (9.8%) for the surveyed districts. Malnutrition, in all its forms, is caused by multiple interlinked factors and has both short and long term detrimental health effects [9], [10]. It affects the cognitive and physical development of children and significantly contributes to the morbidity and mortality [11], [12]. In addition, stunted children are at greater risk of infections like diarrhoea, measles, malaria and Pneumonia.

The trend analysis revealed no significant relationships between nutrition indicators and selected factors thought to influence nutrition outcomes. In the non-SAGE districts however, a positive relationship was seen between WFH and WFA z-scores and sickness in the previous 7 days. In addition, there was no significant relationship between nutrition outcomes and selected limiting factors in the pilot districts. It is recommended that nutrition objectives, interventions and expected outcomes should be clearly included in the design of social protection programmes such as SCG, so that it’s easier to implement and directly attribute the nutrition outcomes to such programmes. In addition, the main objective of the SCG/Cash transfer should be clear, so that the program design ensures that the main use is geared towards achieving that objective. There is also need for a multi-sectoral approach to improving the livelihoods of older persons and their household members. This will facilitate a more comprehensive and integrated approach for enhancing nutrition, health and WASH indicators among older person’s households. The proportion of older persons is increasing given the increasing life expectancy hence, a need for a review on critical/in-depth aspects around the elderly health, nutrition, dependency, and retirement age. As such, there is need for a comprehensive policy and implementation framework for providing social security to older persons, esp. those who worked in the informal sector. A life-cycle approach to social security is important, since older persons do not
live alone, hence their minimal benefits are shared with other members, affecting their nutrition outcomes. Lastly, the study does not suggest that the SCG does not benefit the elderly, but rather suggests that it does not directly contribute to household nutrition outcomes. Future research should focus on looking at contribution to livelihoods because nutrition research uses a specific set of indicators that were not embedded in the programme design and therefore unrealistic to look at it as a key expected outcome.

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