

1.9.4.2 Food security by using food consumption score

Table 1.6 shows food security by using food consumption score in nearest neighbour matching on average the programme improved food security by 43 percent at $p < 0.01$ and the result was highly significant at a 1 percent level of significance while in radius and kernel matching food security improved by 49 percent and 48 percent at $p < 0.01$ respectively. On average the programme improves a household's food security by increasing food consumption by an average of 47 percent.

Table 1. 6: Impact of conditional cash transfers on food security by using food consumption score

Outcome variable		Model Specification					
		Nearest neighbour		Radius Matching		Kernel Matching	
		ATT	P	ATT	P	ATT	P
Food security	FCS	0.426	0.0005***	0.486	0.001***	0.484	0.0005***
Observations							
CCT beneficiary		171		148		171	
Non CCT beneficiary		279		279		275	

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

From Table 1.6 the household's food consumption was improved in beneficiaries which implies that there was an improvement in the household's dietary diversity and nutrient intake. In another way, having nutritious food improves household health status. The results were correlated with the studies of (Haushofer and Shapiro, 2016; Bhalla *et al.*, 2017; Kapama, 2017; Kileo, 2019; Kronebusch and Damon, 2019; Resosudarmo *et al.*, 2020) who concluded that conditional cash transfer improves food security in beneficiary households as the cash provided helps them to buy food for their households. Cash transfers provide the chance for households to purchase food at the market and therefore increase the consumption of a variety of foods which directly increases the nutritional value of the households. The cash provided offers a free option to buy different types of food according to the needs of the members of the household.

Furthermore, cash provided used by beneficiaries to finance agricultural activities or in other income-generating activities that generally increase the household income which consequently increases the chance of accessing food (Raghunathan *et al.*, 2017; Burch *et al.*, 2018; Mohammdi, 2019; García-guerra *et al.*, 2019; Palmeira *et al.*, 2019; Mzingula, 2020).

1.9.5 Sensitivity analysis of food security

The Rosenbaum bounds sensitivity analysis was performed to check for the presence of hidden bias caused by unobserved covariates between the treated and control groups.

Table 1.7: **Rosenbaum sensitivity analysis for average treatment effect on treated**

Rosenbaum bounds for coping strategic index (N= 450 matched pairs)			Rosenbaum bounds for food consumption score (N= 450 matched pairs)		
Gamma	Sig+	Sig-	Gamma	Sig+	Sig-
1	0	0	1	0	0
2	0	0	2	0	0
3	3.3e-15	0	3	0	0
4	7.6e-12	0	4	0	0
5	8.0e-10	0	5	0	0
6	1.8e-08	0	6	2.0e-15	0
7	1.7e-07	0	7	1.7e-13	0
8	9.2e-06	0	8	5.1e-12	0
9	3.4e-06	0	9	7.0e-11	0
10	9.9e-06	0	10	5.8e-10	0

***Gamma-log odds of differential assignment due to unobserved factors; Sig+ - upper bound significance level; Sig- - lower bound significance level**

Table 1.7 shows that p-critical values of all outcome variables estimated at various levels of critical gamma values are significant at $p < 0.05$, indicating that the main covariates influencing conditional cash transfer participation and the outcome variables have been considered, and changes in gamma values did not change the study conclusions. Therefore, the positive effect of conditional cash transfer on household food security was not influenced by hidden bias due to unobserved covariates.

1.10 Conclusion and Recommendations

1.10.1 Conclusion

The main objective of this study was to assess the impact of conditional cash transfers on household food security. Based on the findings the study observed that the conditional cash transfer programme in the Sumbawanga Municipality has a positive impact on reducing poverty, especially on food security as the programme reduces the use of adverse coping strategies and at the same time the cash used to improve households' food consumption. This implies that a conditional cash transfer programme improves household food security by increasing food consumption while reducing adverse coping strategies. To be a beneficiary was more advantageous than non-beneficiary as many of them in the study area experience food poverty. Through the programme, poverty was reduced as the cash given to beneficiaries assists them to meet their food consumption while preventing them from falling into extreme poverty and improving their livelihood in the long term.

1.10.2 Recommendations

Therefore, based on the study findings and conclusion, it is recommended that:

- i. The Ministry under the President's Office Public Services Management and Good Governance and Non-Government Organizations (NGOs) should continue to support

- CCT programmes to increase the amount of cash given to poor households. Increasing the amount of money given by CCT programme can support their daily life needs and invest in income-generating activities.
- ii. The Government, Non-Government Organizations and other stakeholders have to work together to ensure food prices remain stable and incentives are given to key players to ensure long-term food access.
 - iii. TASAF has to increase the number of beneficiaries to help more households graduate from food poverty in the study area.

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