

Role of Media Exposure to Reduce Household Food Insecurity: A Case of a Rural Mountain Village in Nepal

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Households in Nepal are facing food insecurity and those in the rural mountain regions are more vulnerable to food insecurity. Rural mountain areas experience limited access to food due to poverty, geographic isolation, and lack of infrastructure and market access. Additionally, a number of agricultural production constraints and climate vulnerabilities make these areas more susceptible to food insecurities. Limited access to information further compounds food insecurity by depriving households of crucial knowledge about proper food choices, consumption practices, and improved agricultural technologies. This study hypothesized that the rural household's exposure and access to the media such as radio, television, mobile phones, newspaper, and internet could bridge the information gap and enhance food security. Media exposure could play a key role in reducing food insecurity by enabling households to make informed decisions about food choices and consumption patterns. The theoretical framework of media dependency theory supports this hypothesis, suggesting that rural households' reliance on media for food-related information can significantly influence their food security decisions and practices. The global network of information in terms of food consumption, food culture, food markets, food choice, and agriculture systems shape the perspectives and actions of families. The objective of this study was to determine the relationship between the extent of media exposure of household members and the household food insecurity in rural mountain regions of Nepal. In this study, we considered the household members' exposure or access to media as an indicator of globalization or information access. Specifically, we examined if the exposure of household members to media was associated with the household food insecurity, adjusting for factors such as the education level and age of the household head, number of livestock, family size, average annual income of the family, and arable land size. This study used quantitative data from 262 (out of 758) randomly selected households through a survey conducted in 2022 in ward number two of Makalu Rural Municipality (MRM) of Sankhuwasabha district, a mountain village of Nepal. Agriculture dominated the source of livelihood of most local people in the study area. Exposure of household members to media was measured as the numbers of media items used, such as, mobile phones and computers (both laptop and desktop) with internet access, newspapers, radio, and television. We used food intensity score as the dependent variable, which was calculated based on the Household's Food Insecurity Access Scale (HFIAS). The HFIAS comprises a set of nine questions designed to capture the increasing level of severity of food

insecurity over the past year. Responses were measured on a 4-point scale (0-3) where 0 = never (no food insecurity), 1 = rarely (infrequently/mildly experienced food insecurity), 2 = sometimes (moderate experience of food insecurity), and 3 = mostly (frequent/ severe experience of food insecurity). The sum of added scores ranged from 0 to 27, where 0 indicates a fully food-secure household and higher scores show greater insecurity.

The descriptive results (Table 1) found that 91.6% households had exposure to media while only 13.4% households were fully food secured, with a mean food security intensity score of 5.67. It also revealed that each household used 3.26 media items on average. The correlation result demonstrated the statistically significant moderate negative relationship ($r = -.382, p < .001$) between media exposure and food intensity score. Similarly, linear regression (Table 2) showed the access to media, measured as the number of media items, was negatively associated ($\beta = -.348, p < .001$) with household food insecurity controlling for the factors representing age and education level of household head, family size, land holding and annual income of the household and livestock holdings. We found that each unit increase in the number of media items in the households reduced the food insecurity score by 0.799. Similarly, average annual income of households was negatively related ($\beta = -.272, p < .001$) to food insecurity. However, family size was positively related ($\beta = .162, p < .01$) to food insecurity intensity score. Age and education of household heads, land holding size, and number of livestock did not impact food insecurity. Goodness of fit measure (adjusted R- square of 0.224) suggested that the set of independent variables in our study explained about 22.4% of the adjusted variance about the dependent variable, food insecurity index. In conclusion, the findings suggest that increased media exposure could contribute to food security by enhancing knowledge about food availability, pricing, policies, and coping strategies in rural mountain regions of Nepal. The study offers valuable insights for policymakers, community leaders, and other stakeholders involved in food security initiatives, emphasizing the importance of prioritizing the expansion of access to diverse media platforms in rural areas as strategic intervention to enhance household food security.

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Table 1. Descriptive statistics of household characteristics and key variables used in the analysis.

Variables	Frequency (n=262)	%	Mean	SD
Family size			5.15	2.17
Age			45.87	14.83
21-30 years	41	15.6		
31-40 years	65	24.8		
41-50 years	77	29.4		
51-60 years	33	12.6		
61-70 years	30	11.5		
71 and above years	16	6.1		
Annual income (Rs.)			2.75	1.39
Below 50 thousand	55	21.0		
50 - 100 thousand	73	27.9		
100 - 200 thousand	54	20.6		
200 - 400 thousand	55	21.0		
400 thousand and above	25	9.5		
Land holdings (ha)			1.05	0.91
Own land- Yes	1	0.4		
Own land- No	261	99.6		
Educational level				
Illiterate	77	29.4		
Literate	185	70.6		
If literate,				
Literate (able to read and write only)	112	42.7		
Primary (grade 1-5)	26	9.9		
Basic Level (up to grade 8)	22	8.4		
Secondary (up to grade 12)	25	9.5		
Livestock			12.25	16.88
Yes	243	92.7		
No	19	7.3		
Exposure to media			1.56	0.86
Yes	240	91.6		
No	22	8.4		

Table 2. Results of linear regression analysis for factors influencing household food insecurity.

Predictor/ Factors	Coefficient (β)	t-statistics	p-value
Media scale	-0.348	-4.983	0.000***
Education level of household head	-0.052	-0.825	0.410
Age of household head	0.047	0.752	0.453
Livestock	0.043	0.768	0.443
Average annual income	-0.272	-4.625	0.000***
Landholding	-0.076	-1.297	0.196
Family size	0.162	2.481	0.010**

** p < .01, *** p < .001

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