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## The Effect of Individual Preferences on Food and Nutrition Security. Evidence How Risk Preference, Future Discounting and Altruism Affect Food Consumption of Individuals and Households

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### Abstract

The probability of a sufficient calorie intake and a diverse diet is related to various social, economic and political factors. Often neglected, individual preferences and motivation often form nutrition choices as well. Particularly core concepts of behavioural economics – altruism, risk and time preferences – affect consumption choices of individuals, and of dependent household members. Therefore, this study explores the linkages between behavioural preferences and food and nutrition security utilising a household-level survey and games for preference elicitation. The study adds to the literature theoretically and empirically by assessing the influence of core concepts of behavioural economics on food and nutrition security.

We extend the theoretical literature by adding a stochastic component for future periods to an expected utility optimisation approach. Expectations of a normally distributed future outcomes vary depending on individual risk considerations and discount rates. Altruism and reciprocity levels additionally determine food sharing within households in the current period.

The household survey is carried out in rural areas of India, in regions with severe malnutrition rates and high poverty rates. 954 households are interviewed with each having at least one child below 2 years of age. The households are selected using a stratified randomised sampling technique from 85 villages. Food and nutrition security indicators are obtained (e.g. FIES, MDDW, MAD, anthropometric measurements). Hypothetical games are used in a mix of qualitative and quantitative questions for preference assessment. These elicit risk preference, time preference and altruism of the household heads and the spouses.

Controlling for individual, household and village covariates, we find that female individuals that are 1 SD more risk affine than average have a 30% better dietary diversity score. We further find that male household heads with a 1 SD higher altruism level than average improve the dietary diversity of their female spouses by around 5%. Risk affinity can also increase the food access of households by 13% (measured as household dietary diversity score). Effects on anthropometric measurements indicate that higher risk affinity and a lower discount rate positively affect the height of women, indicating a long-term effect.

**Keywords:** Behavioural economics, food and nutrition security, individual preferences