

# Food Insecurity and Psychosocial Well-being in Informal Settlements and Slums: A Malawian Study



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## Introduction

- Food insecurity is when individuals and households have little or no access to adequate food.
- Some major causes of food insecurity are climate change, economic crises, and conflict.
- Between 674 and 796 million people are food insecure globally. One of the top regions contributing to this number is Sub-Saharan Africa.
- In Malawi, increasing urbanization has led to more people living in low-quality housing. 80% of the demand for housing is being met through informal settlements.
- Urbanization is associated with an increase in food insecurity. In Malawi, about 2.6 million people are experiencing acute food insecurity.
- The non-physical impacts of food insecurity are seldom discussed in comparison to the physical impacts. These non-physical impacts are particularly understudied in slums and informal settlements.

## Objective

- Therefore, our study aimed to examine the relationship between food insecurity and psychosocial health outcomes among people living in slums and informal settlements.
- We hypothesized that:
  - Higher food insecurity scores will lead to higher depression symptomatology.
  - Higher food insecurity scores will lead to higher anxiety symptomatology.
  - Higher food insecurity scores will lead to higher levels of stress.

## Methodology

### Study Setting:

- Data were collected from three Malawian urban informal settlements in the city of Lilongwe (N=1029).

### Independent Variable:

- Household Food Insecurity, assessed via a 9-item scale asking participants about their access to food in the previous four weeks.

### Outcome Variables:

- Depression: measured using the WHO-5 Well-being index, depression= score > 12.
- Stress: measured using the Perceived Stress Scale, a Likert scale ranging from 0 (never) to 4 (always).
- Anxiety: measured using the Generalized Anxiety Disorder-7 Scale, severe anxiety= score > 14.

### Control Variables:

- Level of education, age, marital status, number of children under five, participant gender, gender of household head, and subjective socioeconomic status.

### Data Analysis:

- Descriptive: We assessed the sample distribution for all independent, outcome, and control variables.
- Bivariate: We performed a logistic regression to assess the relationship between the predictor variables and stress, anxiety, and depression symptomatology.
- Multivariate: We performed a regression analyses to assess the effect of household food insecurity on stress, anxiety and depression symptomatology, adjusting for other predictors of the outcome variables.

## Results

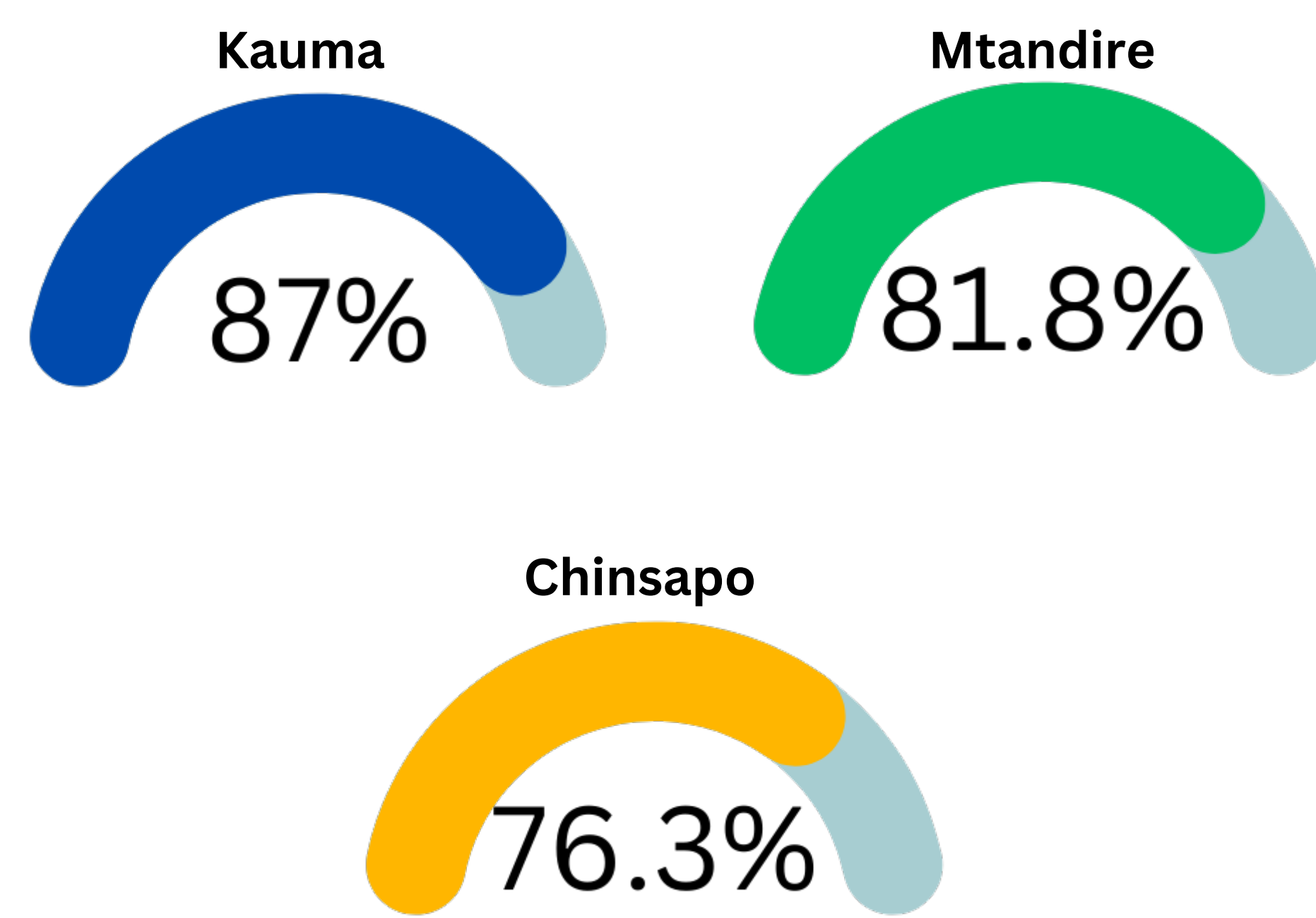


Figure 1: The proportion of people experiencing mild to severe food insecurity in the Kauma, Mtandire, and Chinsapo settlements

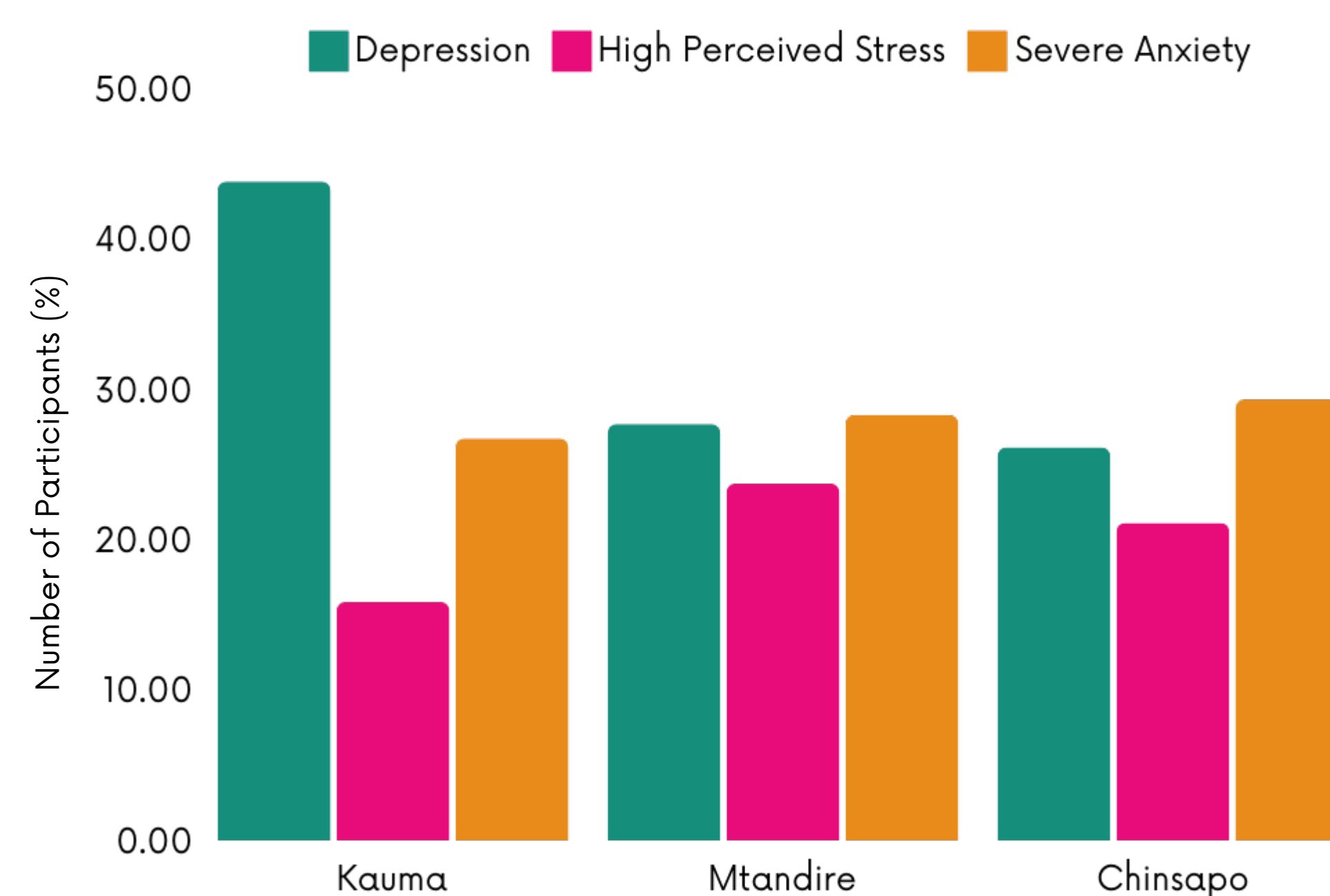


Figure 2: The proportion of people experiencing depression, stress, and anxiety at the three study sites

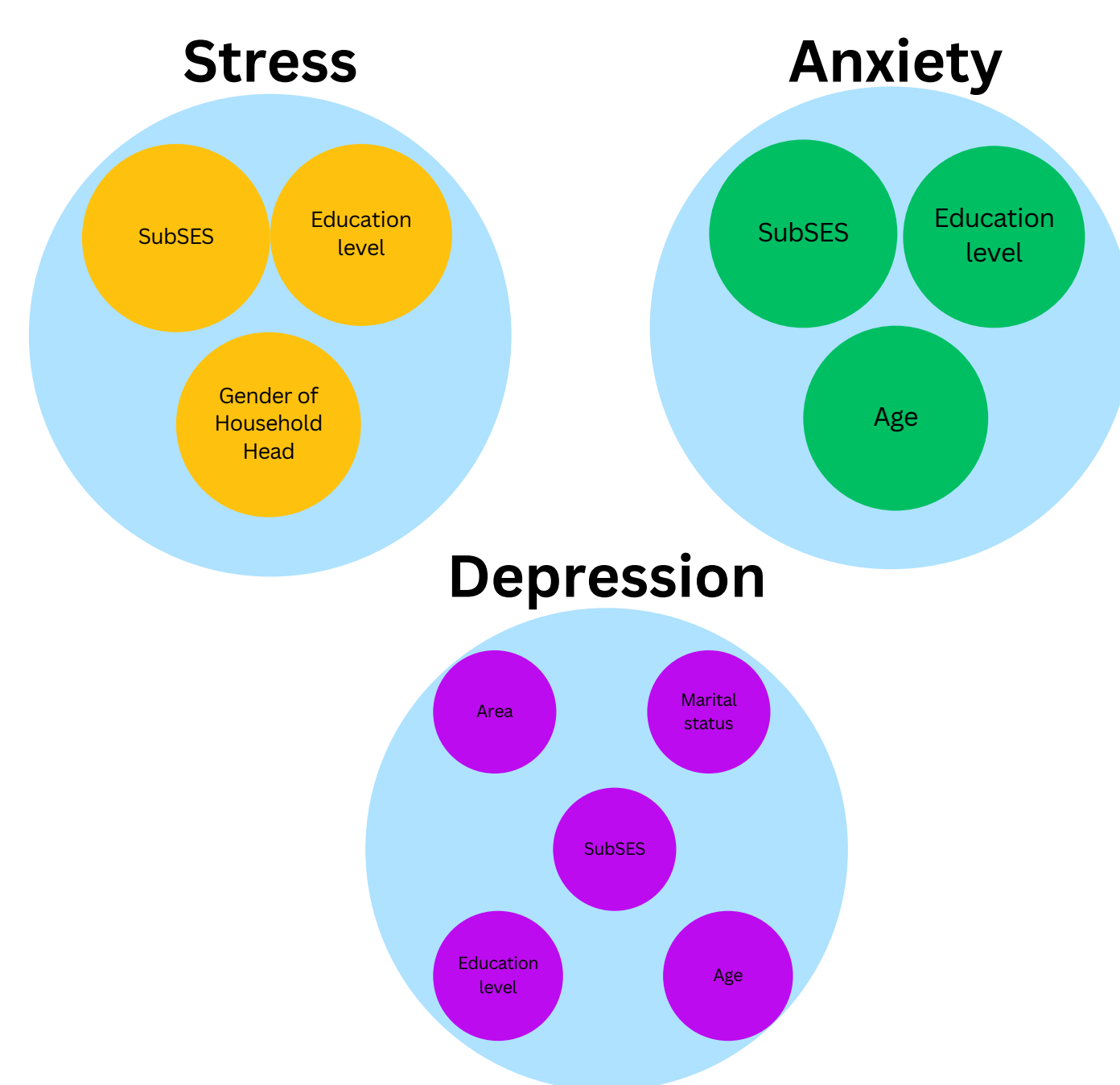


Figure 3: The variables statistically significantly associated with the outcome variables at the bivariate level ( $p < 0.05$ )

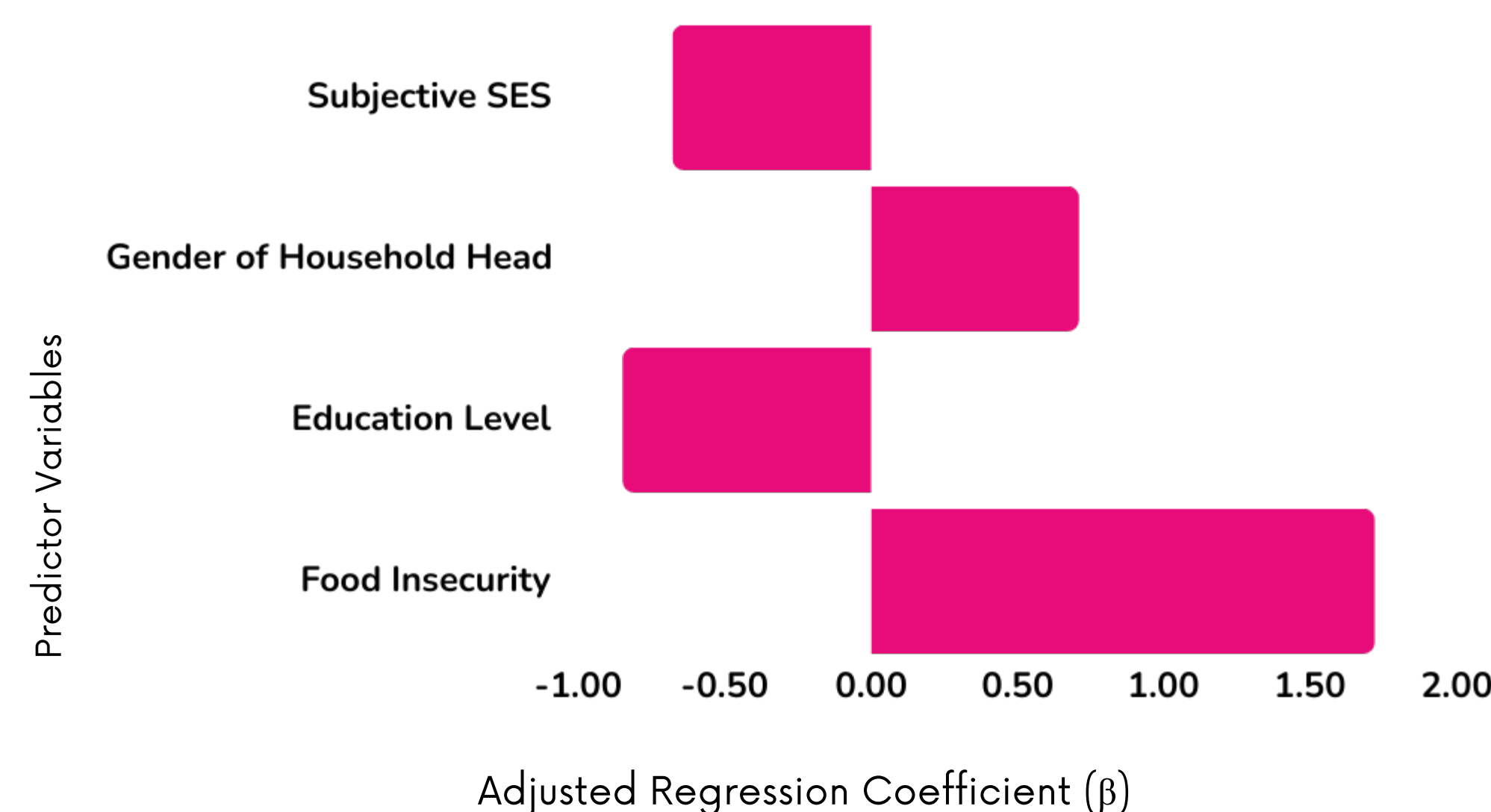


Figure 4: A bar chart showing statistically significant relationship between food insecurity and stress when controlling for other predictor variables at the multivariate level

## Results

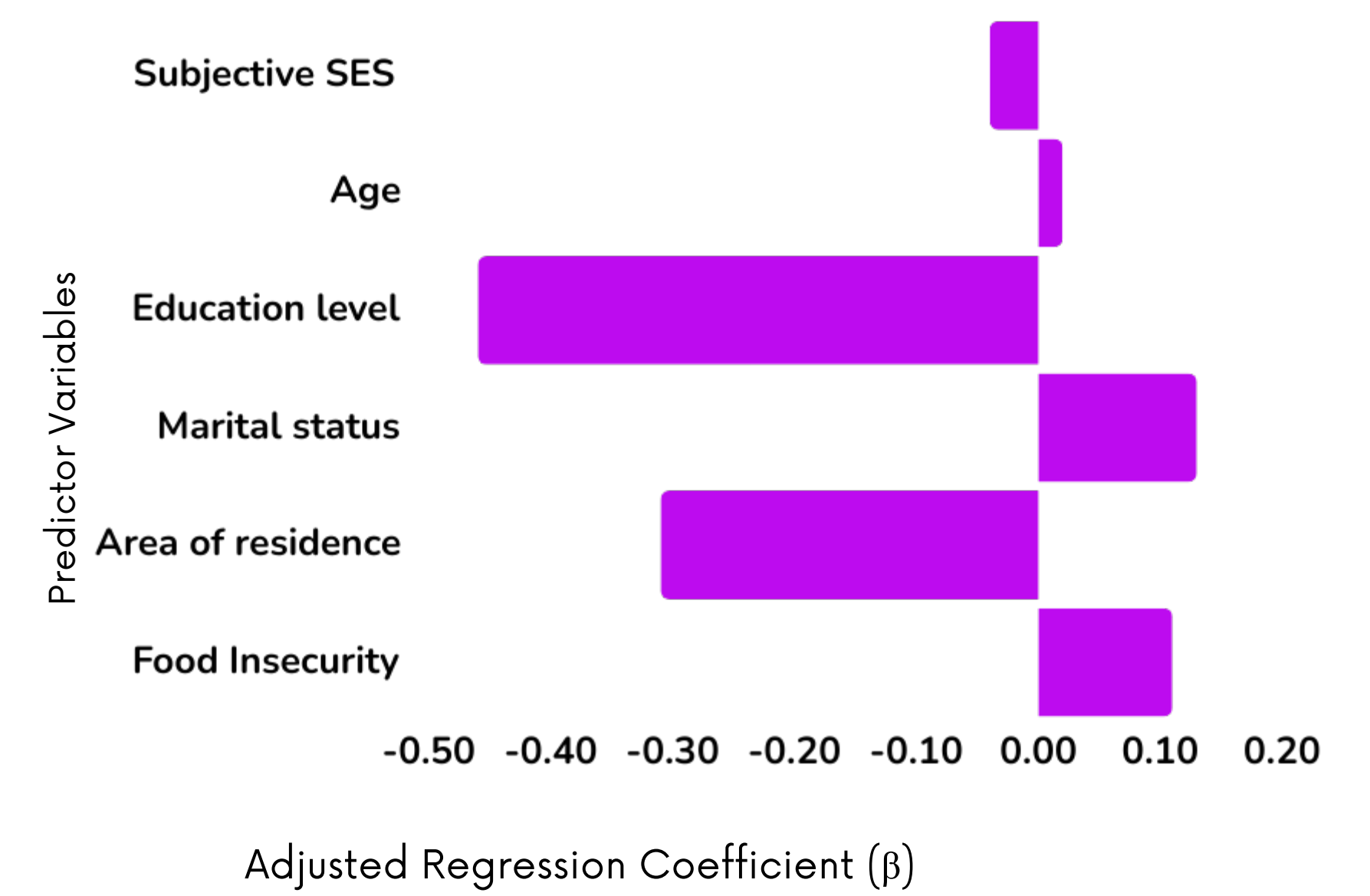


Figure 5: A bar chart showing a statistically significant relationship between food insecurity and depressive symptomatology when controlling for other predictor variables at the multivariate level

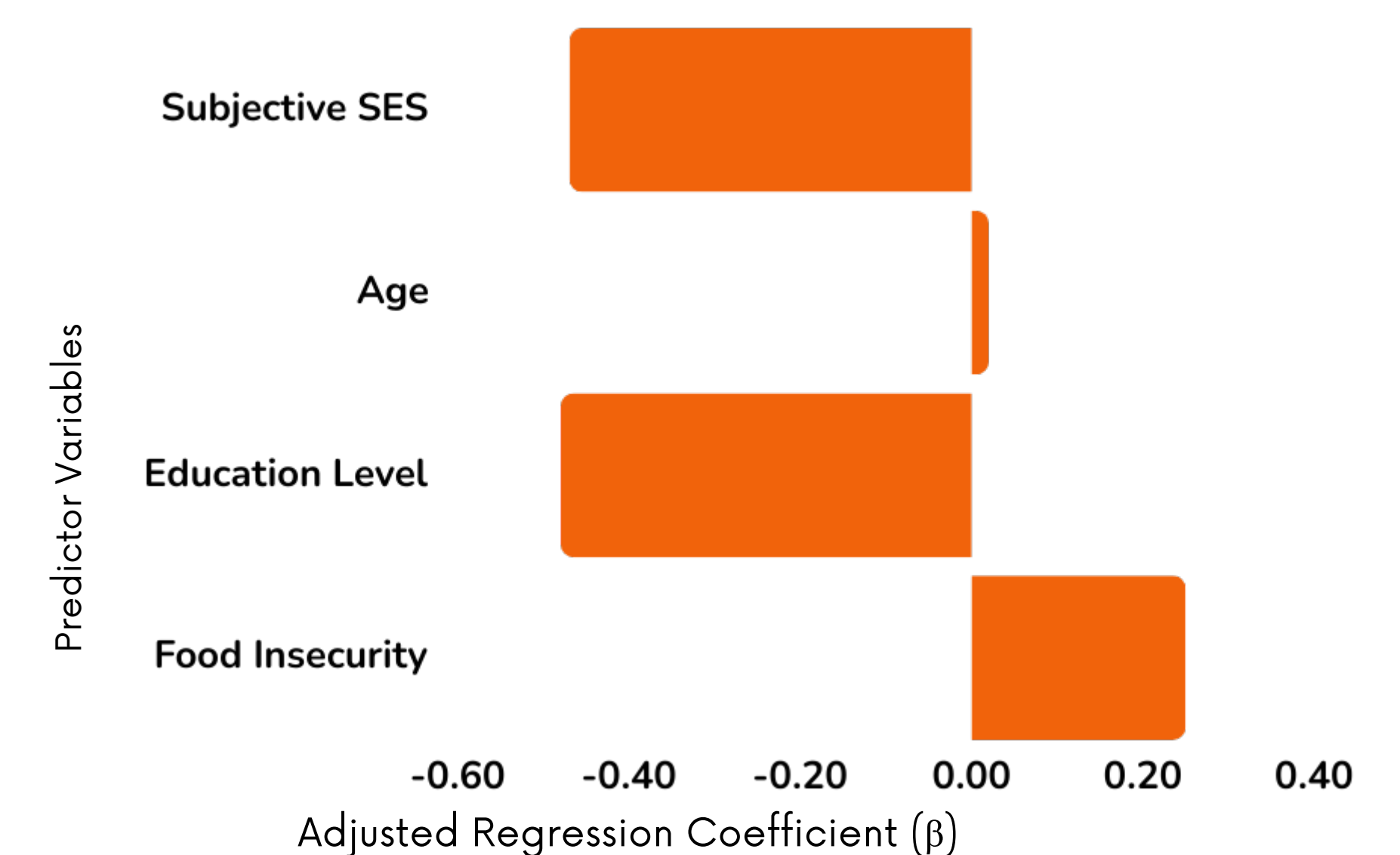


Figure 6: A bar chart showing a statistically significant relationship between food insecurity and anxiety when controlling for other predictor variables at the multivariate level

## Conclusion

- Food insecurity has deleterious consequences on the psychosocial well-being of people living in slums and informal settlements.
- This study showed that an increase in food insecurity is correlated with an increase in stress, anxiety, and depression symptomatology.
- There is a variation in distinct psychosocial outcomes; food insecurity leads to higher depressive symptomatology in Kauma, higher perceived stress in Mtandire, and severe anxiety in Chinsapo.
- Higher subjective socio-economic status (SES) and level of education buffer the effect of food insecurity on psychosocial outcomes in all models.
- Increase in SES and level of education were associated with a decrease in the experience of stress, anxiety and depression symptomatology.
- We also had some surprising findings:
  - Being a widow and being the head of the household as a female was associated with an increase in the experience of stress.
- This study calls for innovative initiatives to improve food insecurity and psychosocial health outcomes among people living in slums and informal settlements.
- Such initiatives ought to focus on alleviating poverty and tackling gender disparities in each settlement.

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