

## Food Insecurity and Mental Health among Adolescents in Southwest Ethiopia: Structural Equation Modeling Analysis

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**Abstract :** Background: The biological and psychosocial consequence of food insecurity on physical health and nutritional status has been reported. But, its effect on mental health during adolescence remains unexplored. Thus, the main aim of this analysis is to examine the mechanism by which food insecurity is linked to mental health among adolescents living in Jimma, Southwest Ethiopia. Methods: We used data from third round observation of Jimma Longitudinal Family and Youth Survey (JLFSY). A total of 1,521 adolescents included for the main analysis. Food insecurity was measured using 5-items scale and The Self Reporting Questionnaire (SRQ-20) was used to measure mental distress. Structural equation modeling analysis was done using maximum likelihood estimation method. Model diagnostics test was reported. All p values were two tailed and P value  $\leq 0.05$  was used to determine statistical significance. Results: The prevalence of mental distress was 20.8%, 95% CI: (18.8, 22.9). After adjusted for covariates, the final model depicts food insecurity was associated with adolescent mental distress ( $\beta=.324$ ). This analysis showed 94.1% of the effect of food insecurity on mental distress is direct. By contrast, 5.9% of the food insecurity effect is mediated by physical health. In addition, Self-rated health ( $\beta=.356$ ), socioeconomic status ( $\beta=-.078$ ) parental educational ( $\beta=.170$ ), living in urban ( $\beta=.193$ ) and female headed household ( $\beta=.205$ ) were associated with adolescent mental distress. Conclusions: This finding highlights the direct effect of food insecurity on adolescent mental distress. Therefore, any intervention aimed to improve mental distress of adolescents should consider strategies to improve access to sufficient, safe, and nutritious food. Beside this, prevention of underlying factors such as psychosomatic health illness and improving socio economic status is also very critical. Furthermore longitudinal relationship of the long term effect of food insecurity on mental health should be investigated.

**Keywords :** adolescent, Ethiopia, food insecurity, mental health

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