PSYCHOSOCIAL FACTORS AS MEDIATOR TO FOOD SECURITY STATUS AND ACADEMIC PERFORMANCE AMONG UNDERGRADUATE STUDENTS IN UNIVERSITI PUTRA MALAYSIA

Nor Syaza Sofiah A[1], Norhasmah S[1,2,3], Sabri MF[4]

[1]Department of Nutrition, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia
[2] Research Centre of Excellence for Nutrition and Non-Communicable Disease, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia
[3]Malaysia Research Institute on Ageing (MyAgeing), Universiti Putra Malaysia
[4]Department of Resource Management and Consumer Studies, Faculty of Human Ecology, Universiti Putra Malaysia

INTRODUCTION

- Food insecurity is a threat to university students.
- Students experienced food insecurity had higher odds for stress, anxiety, depression and low academic performance (Bruening et al., 2016; Patton-Lopez et al., 2014; Payne-Sturges et al., 2018; Maroto, 2014; Khurshid et al., 2017; Owen et al., 2012; Awadalla et al., 2020).
- It is crucial to prevent food insecurity in order to produce a quality and productive future nation.
- Therefore this study to determine psychosocial health (stress, anxiety and depression) as mediator to food security status and academic performance among undergraduate students in Universiti Putra Malaysia.

METHODOLOGY

- A cross-sectional study

Sample selection

Universiti Putra Malaysia
7 randomly selected faculties
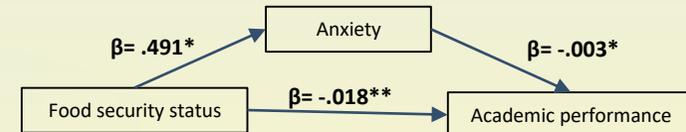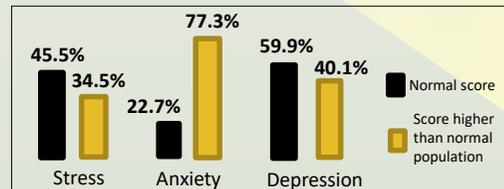663 undergraduate students completed the questionnaire

Self-administered questionnaire

Demographic and socioeconomic characteristics
Food security status (FSSM 10-item)
Psychosocial factors (DASS-21)
Academic performance (self-reported CGPA)

Data analysis

IBM SPSS (Descriptive, Bivariate and Multivariate analysis)
SPSS PROCESS macro (Hayes, 2013) – Mediation analysis

RESULTS

Figure 1: Gender — 32.4%, 67.6%

Figure 2: Monthly household income — 44.6% <RM4850, 43.8% RM4850-RM10959, 11.6% >RM10595

Figure 3: Food security status — 37.2% Food secure, 62.8% Food insecure

Figure 4: Academic performance — CGPA <3.75 88.6%, CGPA ≥3.75 11.4%

Figure 5: Stress, anxiety and depression status — Stress 45.5% / 34.5%, Anxiety 22.7% / 77.3%, Depression 59.9% / 40.1% (Normal score / Score higher than normal population)

β= .491* (Food security status → Anxiety)
β= -.003* (Anxiety → Academic performance)
β= -.018** (Food security status → Academic performance)

Figure 6: Mediation of association between food security status and academic performance by anxiety (*p<0.05 **p<0.001)
Food insecurity was directly related to poor academic performance (β=-.018, 95% CI: -.026,-.001, p<0.001). The effect of food security on academic performance was mediated through anxiety (β=-.001, 95% CI: -.002,-.0001).

β= .349* (Food security status → Depression)
β= -.003* (Depression → Academic performance)
β= -.019** (Food security status → Academic performance)
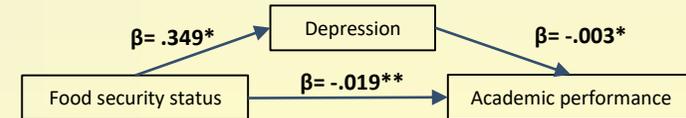
Figure 7: Mediation of association between food security status and academic performance by depression (*p<0.05 **p<0.001)
Food insecurity was directly related to poor academic performance (β=-.019, 95% CI: -.026,-.011, p<0.001). The effect of food security on academic performance was mediated through depression (β=-.001, 95% CI: -.015,-.001).

DISCUSSION

Linear regression reveals that food security status associated with CGPA (Maroto et al., 2015; Martinez et al., 2018; Raskind et al., 2019), anxiety (Martinez et al., 2018; Raskind et al., 2019; Awadalla et al, 2020), depression (Bruening et al., 2016; Martinez et al., 2018; Raskind et al., 2019) but not stress, therefore stress was not included in mediation analysis.

Uncertainty to maintain food for body can trigger prolonged stress that worsen students psychosocial and than become anxiety and depression (Shamsuddin et al, 2013; Pryor et al, 2017)..

Consistent with past research, anxiety and depression mediate the relationship between food security status and academic performance (Martinez et al., 2018; Raskind et al., 2019).

Managing anxiety and depression can help students' academic performance at the same time work on reducing food insecurity.

CONCLUSION

The result suggests that student's affair division and counselling unit play important role organizing psychosocial health management session as an alternative to improve academic performance besides diminish food insecurity among students.
Implementing food pantries project in campus can help improving food security status, by giving free and healthy food to the needed students.