The Association between BMI and self-reported eight-items Patient Health Questionnaire (PHQ-8) in the UAE Healthy Future Pilot Study

Mitha Al Balushi1, Fatima Al-Maskari2, Syed Javaid2, Luai Ahmed2, Abdishakur Abdulle1, Amar Ahmad1, Raghib Ali1

1 Public Health Research Center, New York University Abu Dhabi, United Arab Emirates; 2 College of Medicine and Health Sciences, United Arab Emirates University, United Arab Emirates

INTRODUCTION

The UAE Healthy Future Study (UAEHFS) is one of the largest prospective cohort studies in the region which examines causes and risk factors for chronic diseases among the nationals of the UAE.

OBJECTIVES

The aim of this study was to investigate the relationship between Body Mass Index (BMI) and the PHQ-8 score as a screening instrument for depression among the UAEHFS pilot participants.

MATERIALS & METHODS

A multivariate linear regression model was used to investigate the association between PHQ-8 score and BMI adjusted for age and gender. In a sensitivity analysis, 100 multiple imputations (MI) were performed using classifications and regression trees. The analysis was performed using the software R.

RESULTS

Data from 487 eligible participants (67.8% male) with median age of 30 years (Interquartile-Range: 23-38) was used. Of these 231 (44.7%) were included in the complete case analysis. The estimated effect of BMI from the fitted multivariate linear regression model was 0.139 (95%CI: 0.060-0.218), and 0.097 (95%CI: 0.025-0.169) for the omitted data, and MI respectively.

CONCLUSIONS

A higher BMI was statistically significantly associated with a higher-risk of reporting depression. Additional research is needed, using the main UAEHFS data after completing recruitment.

Figure 1: Estimates the BMI effect with corresponding 95% confidence intervals (95% CI) in a multivariate quantile regression model adjusted for age and sex. Red dots are the estimated BMI effect in the imputed datasets and the black dot represents the omitted dataset.

DISCUSSION

Our results can help contribute to the knowledge based on current and potential population mental-health in the UAE and Gulf Region. The finding of this study shows that excess BMI may be associated with an increased risk of developing depression and vice versa; and this could add to the future direction of the field of mental-health research.

The Authors declare that there is no conflict of interest

Contact: Ms Mitha Al Balushi, ma4643@nyu.edu

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