

## Process evaluation of the H.E.B.A.T! Program: A randomized control trial intervention to combat childhood obesity in Negeri Sembilan, Malaysia

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### Abstract

**Background:** We aimed to determine the correlation of BMI with depression and find its determinants, in a large-scale study sample.

**Method:** We Used the data of participants in the Iranian Children and Adolescents' Psychiatric Disorders Study (IRCAP), which was the first national community-based, cross-section study performed in this field in Iran, in 2017. Overall 30532 children and adolescents aged 6-18 was selected with random cluster sampling method from urban and rural areas of all provinces of Iran. Binary logistic regression methods were used to analyze the data.

**Results:** Out of total 30532, 25321 children and adolescents who had both measured BMI and interviewed for K-SADS entered to the study (12455 boys and 12866 girls). We categorized the participants according to the Iranian cut-off points for BMI classification. In boys after controlling for age, father's and mother's job and education, and place of residence, the probability (OR) of depression in underweight, healthy weight, and overweight participants compared to obese subjects were 2.19 (95% CI: 1.00 to 4.81), 1.06 (95% CI: 0.73 to 1.55) and 0.80 (95% CI: 0.49 to 1.32 ), respectively. In girls subgroup, after controlling for aforementioned covariates, the probability (OR) of depression in healthy weight, overweight, and obese participants compared to underweight subjects were 1.29 (95% CI: 0.52 to 3.19), 1.54 (95% CI: 0.59 to 3.98) and 1.79 (95% CI: 0.68 to 4.69), respectively.

**Conclusions:** Underweight boys were more diagnosed with depression than normal weight and overweight boys. While in girls by increasing BMI, the probability for co-morbidity of depression was greater.

research interests include Childhood obesity, obesogenic environment and intervention studies.



### Speaker Publications:

1. Salihin, Siti & Nissirat, Liyth & Md. Noor, Rafidah & Ahmedy, Ismail. (2018). Handover Schemes for Vehicular Ad-Hoc Networks Over Long Term Evolution Advanced: A Survey. 1-7. 10.1109/ICASSDA.2018.8477612.
2. Salihin, Siti & Md. Noor, Rafidah & Nissirat, Liyth & Ahmedy, Ismail. (2017). Vehicular Ad Hoc Network (VANET) Handover Based on Long Term Evolution Advanced (LTE-A) Using Decision Technique.
3. Salihin, Siti & Sarbani, Noranizah & Zamahsari, Aslinda. (2014). Analysing and designing a rectangular microstrip patch antenna at 2,4ghz with EBG effect.
4. Yusof, Azita & Salihin, Siti & Ya'acob, Norsuzila & Ali, Mohd Tarmizi. (2013). Performance Analysis of Handover Strategy in Femtocell Network. Journal of Communications. 8. 724-729. 10.12720/jcm.8.11.724-729.

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### Biography:

Siti Sabariah Buhari completed her PhD in Nutrition from Universiti Kebangsaan Malaysia. She is a nutritionist and a lecturer from Center of Nutrition and Dietetics, Faculty of Health Sciences, Universiti Teknologi MARA, Puncak Alam. Her current