

ABSTRACT DETAILS

Factor Survey IV. A hierarchical moderated multiple regression analysis was conducted for this cross-sectional sample.

Results: As parent and peer teasing increased, screen time also increased ($b = 0.43$, $b = .69$, respectively, $p < .001$). Weight status moderated the association between parental weight teasing and screen time ($b = -.61$, $p <.01$) but not for peer weight teasing. For youth of average weight, the association between parental weight teasing and screen time is more pronounced than for youth with higher weight status. All youth, regardless of weight status showed a similar, strong positive association between peer weight teasing and screen time.

Conclusion: Youth who report more peer weight teasing are more likely to partake in screen time. The impact of the association for parent weight teasing and screen time differs based on the child's weight status; suggesting that parental weight teasing has a greater impact on screen time behaviour for youth classified as average weight.

P21B

Obesity-associated Microbial Dysbiosis and Adipose Tissue Dysfunction are More Severe in C57Bl/6 Male Mice Fed High Fat versus High Fat/High Carbohydrate Obesogenic Diets

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Objectives: To compare the effects of two commonly used obesogenic diets on the health of the intestinal microenvironment and adipose tissue (AT) dysfunction in male mice during obesity development.

Methods: 3 week old male C57Bl/6 mice were fed diets comprised of 17% fat (%kcal; LFD), 45% fat (%kcal; 45HFD), or 60% fat (%kcal; 60HFD) for 12wks and metabolic dysfunction, AT inflammation, and intestinal health were assessed.

Results: Mice consuming 60HFD gained more weight and demonstrated more severe epididymal AT dysfunction [e.g. increased crown-like structures (macrophage infiltration) and serum adipokines (leptin and resistin)] compared to 45HFD and LFD. Glucose intolerance and HOMA-IR were significantly higher in the 60HFD group compared to 45HFD and LFD. Fecal microbial dysbiosis was also more severe in the 60HFD group compared to the 45HFD and LFD, including reduced phylogenetic diversity and *Akkermansia muciniphila* abundance. Colon mRNA expression of toll-like receptor 2 (TLR2) and interleukin 6 (IL-6) were significantly increased by 60HFD, while tight junction protein expression (JAM-A) was decreased, compared to LFD and 45HFD. Both HFDs increased colon tumor necrosis factor (TNF- α) and monocyte chemoattractant protein (MCP-1) mRNA expression. Serum lipopolysaccharide binding protein, a biomarker of endotoxemia, was increased by the 60HFD compared to 45HFD and LFD.

Conclusions: Despite interchangeable use of different obesogenic diets in obesity research (high fat or high fat/high carbohydrate), these diets induce different effects on obesity-associated intestinal and AT dysfunction. This study highlights the importance of defining the composition of obesogenic diets used in obesity research to ensure reproducibility between studies.

P22A

Palatable Food Dampens the Long-Term Behavioral and Endocrine Effects of Juvenile Stressor Exposure but May Also Provoke Metabolic Syndrome in Rats

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The juvenile period is marked by a reorganization and growth of important brain regions including structures associating with reward seeking behaviors such as the nucleus accumbens (NA) and prefrontal cortex (PFC). These changes are impacted by juvenile stress and may lead to a predisposition to psychopathologies and abnormal development of brain reward systems. Coping mechanisms to reduce stress such as increased consumption of calorie-rich palatable foods can lead to metabolic disorders. In this study, we examined whether stressors during the juvenile period (postnatal days 27-29) led to increased caloric intake when a palatable diet was accessible, and whether this diet attenuated anxiety-like characteristics and stress responses while leading to a propensity towards obesity in adulthood. We also investigated alterations in mRNA expression of dopamine receptors in the NA and PFC. Results showed that rats that were stressed during the juvenile period displayed higher social anxiety and a sensitized corticosterone response as adults and these effects were attenuated by access to the palatable diet. Nevertheless, rats that experienced juvenile stress and consumed a palatable diet showed greater adiposity in adulthood. Interestingly, the same group displayed greater mRNA expression of dopamine receptors at the NA. This suggests that access to a palatable diet mitigates the behavioral and endocrine effects of juvenile stressor exposure in adulthood, but at the cost of metabolic imbalances and a sensitized dopaminergic system.

P22B

Determinants of Health-related Quality of Life in Thai People Living with Obesity

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Background: Data on health-related quality of life (HRQoL) in Thai people living with obesity(PwO) remains limited. The goal of the study was to describe HRQoL and its predictors in this population.

Methods: Thai PwOs (BMI>23 kg/m², age>18 years) were enrolled at an academic medical center in Bangkok, Thailand from 2015-2017. HRQoL was evaluated using Thai versions of 1)WHO Quality of Life (WHOQOL-BREF) and 2)EQ-5D-5L, which included a utility score and a visual analogue scale (VAS).

Results: 125 PwOs were enrolled (age 41.7 ± 12.7 years, 65.6%female, BMI 36.9 ± 7.8 kg/m²) and stratified into 4 groups: 1) BMI<30kg/m² ($n=20$ (16%); mean BMI 27.8 ± 1.6 kg/m²); 2) BMI 30-35kg/m²($n=43$ (34.4%); mean BMI 32.6 ± 1.4 kg/m²); 3) BMI35-40 kg/m² ($n=22$ (17.6%); mean BMI 36.6 ± 1.4 kg/m²); and 4) BMI>40 kg/m²($n=40$ (32%); mean BMI 46.4 ± 6.0 kg/m²). EQ-5D-5L VAS scores were significantly lower in PwOs with higher BMI (0.77 ± 0.17 vs. 0.73 ± 0.13 vs. 0.71 ± 0.17 vs. 0.59 ± 0.21 , $p<0.001$), with all groups reporting lower scores than national average (0.794). More PwOs in higher BMI groups reported severe/very severe problems in EQ-5D-5L anxiety/depression domain (0% vs. 2.3% vs. 4.5% vs. 5%, $p=0.015$). Total WHOQOL-BREF score did not differ among different BMI groups(92.9 ± 14.9 vs. 90.8 ± 9.4 vs. 90.6 ± 14.2 vs. 87.1 ± 13.4 , $p=0.426$), as well as EQ-5D-5L utility score(0.84 ± 0.16 vs. 0.87 ± 0.11 vs. 0.86 ± 0.14 vs. 0.81 ± 0.18 , $p=0.323$). Multivariate analyses revealed that BMI was the only independent predictor of EQ-5D-5L VAS scores ($\beta = -0.65$, 95%CI -1.053, -0.242; $p=0.002$), while having received ≥ 12 years of education was the only independent predictor of total WHOQOL-BREF scores ($\beta = 7.57$, 95%CI 2.22, 12.92; $p=0.006$).

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