It is well-recognised that obesity is a complex, multifactorial condition which includes both genetic and environmental factors. Although it is controversial, there is evidence that behavioural problems associated with a reduced risk of iron deficiency (at least 2 of 6 iron deficiency anaemia indicators) at age 12M, compared with control intervention (OR=0.53, p=0.001) after controlling for the 6M iron status, iron consumption from food, breastfeeding duration and reported supplemenations use. More Control Bedouin children were hospitalised for any/all infectious disease cause (27.2%), compared to the Sprinkles (14.6%, p=0.005). Significantly more adverse events (changes in stool colour, diarrhoea, and constipation) were reported in Controls than in Sprinkles in both ethnic populations.

**Conclusions** Sprinkles supplementation was associated with a marked reduction in risk of iron deficiency at age 12M and less adverse events and should be recommended formulations.

### P2-374 BEHAVIOUR PROBLEMS AND OVERWEIGHT ADOLESCENTS: THE ROLE OF GENDER AND RESILIENCE

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It is well-recognised that obesity is a complex, multifactorial condition which includes both genetic and environmental factors. Although it is controversial, there is evidence that behavioural problems and being overweight are associated. Furthermore, relatively few studies have analysed the role of resilience in this relationship.

**Objective** To analyse the association between behaviour problems (BP) and the overweight condition (OW) among adolescents and to examine the role of resilience and gender.

**Methods** A cross-sectional study of 951 adolescents aged 11–18 years old who live in Monte Gordo district, a mixed rural-urban region in the northeast of Brazil. The overweight condition was defined as BMI/age z-score greater than +1SD (WHO, 2007). Behaviour problems were estimated by Youth Self Report (YSR/11–18). Resilience was measured by the Wagnild & Young scale. The 90th percentile was used as the cut-off for behavioural problems and resilience scores below the 25th percentile was considered low resilience. OR was obtained using multiple logistic regression.

**Results** We observed an overweight prevalence of 14.7% and identified behaviour problems in 9.9% of subjects. The association between BP and the overweight condition remained after adjusting for gender, resilience, age, ethnicity and socio-economic level (OR: 2.06; 95% CI 1.23 to 3.46). Low resilience was not significant but following a stratified analysis for gender we observed an association between BP and OW only in females (OR: 2.54; 95% CI 1.41 to 4.55).

**Conclusion** The results demonstrate an association between behaviour disturbance and the overweight condition in female adolescents with no protective effect of resilience. We recommend greater incentives to reduce the stressors to which adolescents are exposed.