Child Health

Chairpersons: MA St John, D Jefferson

O – 7

Caregiver training benefits the development of children aged 6–42 months living in child care institutions in Jamaica

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Objective: To improve the development of children 6–42 months in residential care by implementing a caregiver training programme to enhance the quality of the interactions between caregivers and the children.
Design and Methods: This was a two-phased study. The first phase was a cluster randomized controlled trial in which six child care institutions were paired by size and randomly assigned to intervention or control. Children aged 6–42 months, free of physical or mental challenges were enrolled: intervention (n = 37) and control (n = 40). Children's development (DQ) was assessed at baseline and after nine months on the Griffith's Mental Development Scales. The intervention comprised ten caregiver workshops to enrich the interactions between caregivers and children and twice-weekly visits by a Community Health Aide to provide additional training in early stimulation and reinforce workshop content by modelling the activities. In phase 2 using a quasi-experimental approach, an improved intervention package was implemented in the control homes from phase 1. They were compared with the phase 1 control children.
Results: Using multilevel multiple regressions to control for the effect of clustering, there were no significant benefits to DQ or subscale scores in phase 1. In phase 2, there was a benefit of 12.6 points in performance ($p < 0.001$) and 7.6 points in locomotor ($p = 0.04$) and 4.0 global DQ points ($p = 0.06$) compared to the control group.
Conclusion: Institutional children can benefit from an enriched environment with sensitive caregiving.

O – 8

Parental knowledge of child development in clinic attendees in three Caribbean countries

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Objectives: To describe the characteristics of mothers attending government health centres in three English-speaking Caribbean countries and determine associations with knowledge of child development.
Design and Methods: Six hundred mothers from 40 health centres in Antigua and Barbuda, Jamaica and St Lucia were recruited between August 2011 and February 2012. Data were collected on maternal characteristics, depressive symptoms, vocabulary, knowledge of child development and household conditions prior to implementation of a cluster randomized trial of parenting interventions.
Results: Three hundred and ninety-six mothers were enrolled in Jamaica, 105 in Antigua and Barbuda and 103 in St Lucia. Mothers were slightly older in St Lucia and there were more adolescent mothers in Jamaica ($p = 0.02$). No differences were found in grade 11 completion. However, mothers in St Lucia and Antigua and Barbuda were more likely to have obtained Caribbean Examination Council (CXC) passes ($p < 0.0001$) and had higher vocabulary scores ($p < 0.001$) than mothers in Jamaica. Antiguan mothers were more likely to have skilled occupations ($p < 0.007$). More depressive symptoms were reported in Jamaica than in Antigua ($p < 0.001$) and St Lucia ($p < 0.003$). In multivariate regression predicting parenting knowledge, the knowledge scores were significantly higher in Jamaica compared with St Lucia ($p < 0.02$) and Antigua and Barbuda ($p < 0.001$). Mother's vocabulary, occupation and depression symptoms also significantly predicted parenting knowledge.
Conclusions: Levels of educational achievement, occupation and verbal ability were lower in the Jamaican mothers. Housing conditions also tended to be lower in Jamaica and higher levels of depression were reported. However,

mothers in Jamaica were somewhat more knowledgeable of good parenting practices.

O – 9

Academic performance in children with sickle cell disease in Jamaica

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Objective: To assess the academic performance of school-aged children with sickle cell disease (SCD) in Jamaica.
Design and Methods: This was a retrospective, cross-sectional survey to assess performance on a standardized examination: the Grade Six Achievement Test (GSAT). For eligible children aged 12 years and older, GSAT test scores for each subject were obtained from the Ministry of Education for each child, as well as the mean score with standard deviation for their school overall and by gender, for that sitting. Sociodemographic and clinical data were obtained from the clinic database and a questionnaire. Informed consent was obtained.
Results: Sixty-four children (55 Hb SS; 33 females; mean age 12.0 ± 0.5 years) were enrolled. The difference in mean z-scores of the sample by subject area was significantly different ($p < 0.05$) when compared to their peers in all subject areas, except for communication task. The difference in mean z-score by gender and subject compared to school peers was significant only in males for all subject areas except language. Thirty-seven children (57.8%) were classified as underperformers. Haemoglobin level was a significant predictor of subject score rank with a 1 unit increase in haemoglobin associated with a 0.22 to 0.27 standard deviation improvement in relative rank in subject areas.
Conclusion: Children with SCD in Jamaica perform worse in school than their peers, with boys being particularly vulnerable. Level of anaemia was a predictor of school performance. Special attention to curriculum based tests is necessary for identification of children with learning problems in whom appropriate interventions may help.

O – 10

Prevalence of overweight and obesity and associated modifiable risk factors among children 6–10 years old in the North East Health Region, Jamaica

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Objective: To estimate the prevalence of overweight and obesity and identify associated modifiable risk factors among children 6–10 years old in the North East Health Region (NEHR), Jamaica.
Design and Methods: Weights and heights were measured in a representative sample of 5711 children aged 6–10 years old in 34 schools. Overweight and obesity were defined as body mass index (BMI)-for-age Z-score ≥ 1SD and ≥ 2SD, respectively. A case-control study was carried out with 407 participants matched on a 1:1 basis by age, gender and school location to examine the relationship between eating habits, physical activity, child growth, and parental variables. Cases were overweight/obese children and controls were children with normal BMI-for-age (< 1SD to > -2SD). Point prevalence estimates of overweight/obesity were calculated. Odds ratios and the associated 95% confidence interval (CI) were used to examine associations.
Results: Overweight and obesity prevalence among children aged 6–10 years in NEHR was 10.6% and 7.1%, respectively. Overweight/obesity prevalence varied significantly by age, gender and school location. Modifiable risk factors significantly associated with overweight/obesity were increased consumption of sweetened beverages, limited fruit and water intake, reported excessive appetite, low physical activity level, mother's BMI, high parental socioeconomic status and child's growth from ages 1–5 years.
Conclusions: Overweight/obesity prevalence among children 6–10 years old in NEHR was 17.7%. Older children, girls, those attending private schools and urban-public schools had significantly higher rates. Modifiable risk factors associated with overweight/obesity were the child's eating habits, physical activity pattern and mothers' BMI. Appropriately targeted interventions at an early age might lead to reductions in the prevalence of childhood overweight/obesity.

O – 11

Diet, physical activity, weight status and culture among 9–11 year olds in Barbados: A pilot study

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Objective: Barbados, a small island developing state at the end of the nutrition transition, faces an obesity epidemic. Although there is hope of stemming the epidemic in childhood, no descriptions of children's dietary and physical activity (PA) patterns are available for planning purposes. We describe the food and activity preferences, adult encouragement of active and sedentary behaviours for children 9–11 years in relation to weight status and the cultural context.

Design and Methods: We used data from a pilot study on the local drivers of the obesity epidemic among preadolescent children in Barbados. This pilot, which preceded a large scale ongoing study, comprised 62, 9–11-year old school children. Physical activity, sedentary activity and dietary intakes were assessed from recalls. Weight and height were measured.

Results: Sugar sweetened beverages provided 21% of energy consumed. Energy intake significantly explained the body mass index (BMI). Parents selected significantly more of children's sedentary activities and encouraged mostly homework and chores (59%). Children's self-selected school-based activity was significantly related to BMI.

Conclusions: Childhood obesity prevention recommendations and research should focus on culture specific practices that promote acquired tastes for excess sugar and parent-child interactions surrounding PA. Child influenced school-based activity interventions is an important area for preventive intervention research.