





**THE ASSOCIATION OF BIRTH WEIGHT AND CURRENT BODY WEIGHT AND  
ITS ASSOCIATED FACTORS OF PRIMARY SCHOOL STUDENTS IN JOHOR  
BAHRU**

**By  
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**Research Report submitted in partial fulfillment of  
the requirements for the degree of  
Bachelor of Food Science (Food Service and Nutrition)**

**DEPARTMENT OF FOOD SCIENCE  
FACULTY OF AGROTECHNOLOGY AND FOOD SCIENCE  
UNIVERSITI MALAYSIA TERENGGANU  
2012**

## ENDORSEMENT

The project report entitled **The Association of Birth Weight and Current Body Weight and Its Associated Factors of Primary School Students in Johor Bahru** by **Lai Sher Fang**, Matric No. **UK 16478** has been reviewed and corrections have been made according to the recommendations by examiners. This report is submitted to the Department of Food Science in partial fulfillment of the requirement of the degree of Bachelor of Food Science (Food Service and Nutrition), Faculty of Agrotechnology and Food Science, Universiti Malaysia Terengganu.

  
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Date: 29/11/2012

## DECLARATION

I hereby declare that the work in this thesis is my own except for quotations and summaries which have been duly acknowledged.

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## ACKNOWLEDGEMENT

First and foremost, I would like to express my gratitude towards my supervisor, Dr. Hayati Mohd Yusof, whose help, guiding, stimulating and encouragement helped me in all the time of research for and writing of this thesis. I am deeply indebted to her upon her supervision and support that truly helped to improve my final year project report. My grateful thanks also go to all the panels and examiners of my paper, who patient in helping me and giving me valuable hints, constructive suggestions and guidance during the final year project progress till it is fully completed.

Great deals appreciated go to the principals and teachers of Sekolah Kebangsaan Taman Molek and Sekolah Kebangsaan Sungai Melayu for their generous help and cooperation for my project. Not forget, special thanks to all of the students that kindly volunteered their time to participate in this study and their parents who willing to help providing valuable information to my project. The cooperation is much indeed appreciated.

Deepest thanks and appreciation to my friends, Lee Bon Ping, Pan Ein Lalp and Wong Kim Fei, for all their assistance and support during data collection stage in the target primary schools. My grateful special thanks to my parents, family and others for all their love, cooperation, encouragement, suggestion, interest and full of support for the thesis completion, from the beginning till the end. Also thanks to all of my friends and everyone, those have been contributed by supporting my work, inspire and help myself in the compilation and preparation of this paper.

Last but not least, my warmly thanks to the Department of Food Science in giving me the chance to commerce my research and providing the equipments in perfecting my study.

## ABSTRACT

The aim of this study was to investigate the association between the birth weight and current body weight and the confronting factors towards birth weight status and body weight status among national primary school students in Johor Bahru. Parental self-reported questionnaire and direct anthropometric measurement were conducted in getting the data for analysis. A total of 210 students from an urban primary school and two rural primary schools were participated in this study. Birth weight were found linearly and directly correlate with the current BMI, with  $|r| = 0.302$  ( $p < 0.001$ ). Prevalence of low birth weight and high birth weight among the schoolchildren was 8% and 1% respectively, with no significance between genders and residence areas. Average birth weight among the infants born on year 1999 to 2004 is 3.0 kg. Short maternal stature ( $p = 0.042$ ), low maternal education level ( $p = 0.001$ ), low household income ( $p = 0.047$ ), young maternal age at birth ( $p = 0.011$ ), short interpregnancy interval ( $p = 0.044$ ), and preterm birth ( $p < 0.001$ ) were found significantly associated with low birth weight, while paternal height ( $p = 0.018$ ) significantly associated with high birth weight. Paternal height remained as the indicator of body weight status of the subjects, with  $p = 0.046$  for underweight and  $p = 0.026$  for overweight and obesity. Meanwhile, high birth weight infants ( $p = 0.028$ ) remained susceptible towards overweight and obesity in primary school life. Insufficient intake of carbohydrate ( $p = 0.044$ ) and protein ( $p = 0.021$ ) found to significantly associated with underweight while no significant association found between physical activity level and sleeping duration and body weight status.

## ABSTRAK

### KAITAN ANTARA BERAT LAHIR DAN BERAT BADAN SEKARANG SERTA FAKTOR-FAKTOR YANG BERKAITAN DI KALANGAN PELAJAR SEKOLAH RENDAH DI JOHOR BAHRU

Tujuan kajian ini adalah untuk menyiasat kaitan antara berat lahir dan berat badan sekarang serta faktor-faktor mempengaruhi status berat lahir dan berat badan di kalangan pelajar sekolah rendah kebangsaan di Johor Bahru. Soal selidik yang dilaporkan oleh ibu bapa dan pengukuran antropometri telah dilakukan untuk mengutip data untuk tujuan analisis. Sebanyak 210 murid-murid dari sekolah kawasan bandar dan luar bandar telah mengambil bahagian dalam kajian ini. Berat lahir berkait dengan berat badan sekarang secara linear dan langsung, dengan  $|r| = 0.302$  ( $p < 0.001$ ). Kelaziman berat lahir yang rendah dan berat lahir yang tinggi di kalangan kanak-kanak sekolah rendah adalah 8% dan 1% masing-masing, dengan tidak signifikan di antara jantina dan kawasan kediaman. Purata berat badan di kalangan bayi yang lahir pada tahun 1999 hingga 2004 adalah 3.0 kg. Ketinggian ibu yang rendah ( $p = 0.042$ ), peringkat pendidikan ibu yang rendah ( $p = 0.001$ ), pendapatan isi rumah yang rendah ( $p = 0.047$ ), usia ibu yang muda ketika melahirkan anak ( $p = 0.011$ ), selang kelahiran yang pendek ( $p = 0.044$ ) dan kelahiran pramatang ( $p < 0.001$ ) didapati berkait dengan berat lahir yang rendah dengan ketara, manakala ketinggian bapa ( $p = 0.018$ ) didapati berkait dengan berat lahir yang tinggi secara ketara. Ketinggian bapa kekal sebagai penunjuk status berat badan subjek, dengan  $p = 0.046$  bagi murid-murid yang kurang berat dan  $p = 0.026$  bagi murid-murid yang berat berlebihan. Selain itu, berat lahir yang tinggi kekal mempengaruhi berat badan berlebihan dan obesiti dalam kehidupan sekolah rendah. Pengambilan karbohidrat ( $p = 0.044$ ) dan protein ( $p = 0.021$ ) yang tidak mencukupi didapati berkait dengan kekurangan berat badan dengan ketara manakala tidak ada kaitan ditemui antara tahap aktiviti fizikal dan tempoh tidur terhadap status berat badan murid-murid sekolah rendah.