IODINE STATUS AMONG PREGNANT WOMEN IN KELANTAN

NUR ZEZARILA BINTI MOHAMED ZAMUDIN

FACULTY OF AGROTECHNOLOGY AND FOOD SCIENCE
UNIVERSITI MALAYSIA TERENGGANU

2012

Iodine status among pregnant women in Kelantan / Nur Zezadila Mohamed Zainuzain.

Lihat Sebelah

IODINE STATUS AMONG PREGNANT WOMEN IN KELANTAN

By
Nur Zezadila Binti Mohamed Zainuzain

Research Report submitted in partial fulfillment of
the requirement 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 **Iodine status among pregnant women in Kelantan** by **Nur Zezadila Binti Mohamed Zainuzain**, Matric No. **UK 17614** 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, Universiti Malaysia Terengganu.*

.....

(DR. HAYATI MOHD YUSOF)

Main supervisor

Date: 3/2/2012

DECLARATION

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

Signature : .....

Name : NUR ZEZADILA BINTI MOHAMED ZAINUZAIN

Matric No. : UK17614

Date : 08/02/2012

ACKNOWLEDGEMENT

Alhamdulillah, thanks to Allah S.W.T for his blessing which enable me to complete my final project successfully. First of all, thanks to Allah S.W.T because I am able to finish my project successfully. I am grateful and would like to express my sincere gratitude and appreciation to my supervisor, Dr. Hayati Mohd Yusof for her valuable guidance, support, assistance, care, dedication and inspiring suggestions. I appreciate his consistent support and contribute me a lot of good ideas during the experiment and report writing period. I consider myself very fortunate for being able to work with a very considerate and encouraging lecturer like her. My appreciation also goes to Miss Zuraidah and Dr. Yusnita as a coordinator of final year project, for her information and guidance to this course. Special thanks to my parents, Mohamed Zainuzain Bin Yaacob and Zainun Bt Mat Yusoff, for supporting me during my final project. To all respondents who had participated in this survey, I would like to express my appreciation for cooperation in completing the questionnaires. Finally, I would like to express my deepest thanks to my entire friend and to those who have involved directly and indirectly in this final year project.

ABSTRACT

The present study was carried out to determine the iodine status among pregnant women in Kelantan. 100 respondents with age between 16 and 42 were participated in this study. The mean age for this study population is 29.39 (SD=5.73). Questionnaire was used to obtain socio-demographic information, obstetric data, knowledge on iodine and IDDs, knowledge, practise and attitude towards iodized salt and also dietary data. Anthropometry measurement of height and weight were taken. The mean height of the respondents is 153.72 (SD=10.41) while the mean weight is 67.75 (SD=15.69). Determination urinary iodine was performed by using modified micromethod of Sandell-Kolthoff Rection. Median urinary iodine of the respondents showed severe insufficiency, which is 8.5 μg/L. Correlation test showed that there is a significant relationship between socio-economic status and urinary iodine concentration (r = -0. 251, $p < 0.05$). Besides, there are no significant relationship between dietary intake and urinary iodine concentration. As a conclusion, reassessment and monitoring of iodine nutritional status is important even in populations that are apparently considered not at risk of iodine deficiency, especially in pregnant women. Regular administration of iodine, starting at preconception or in early pregnancy and continuing during the period of nursing, is recommended. Health education also should be given to promote adequate iodine intake, as pregnant women are particularly vulnerable to inadequate dietary iodine intake.

ABSTRAK

STATUS IODIN DI KALANGAN WANITA MENGANDUNG DI KELANTAN

Kajian ini telah djalankan untuk menentukan status iodin di kalangan wanita mengandung. Seramai 100 responden yang berumur di antara 16 dan 42 telah menyertai kajian ini. Min umur bagi populasi kajian ini ialah 29.39 (SD=5.73). Kaedah borang soal-selidik telah digunakan untuk mendapatkan maklumat mengenai latar belakang, data obstetrik, pengetahuan terhadap iodin dan penyakit disebabkan kekurangan iodine, pengetahuan, amalan dan sikap terhadap penggunaan garam beriodin dan juga data mengenai pengambilan makanan. Pengukuran antropometri seperti tinggi dan berat juga diambil. Min tinggi bagi responden ialah 153.72 (SD=10.41) manakala min berat ialah 67.75 (SD=15.69). Penentuan kepekatan iodin di dalam urin telah dijalankan dengan menggunakan kaedah *modified micromethod* daripada *Sandell-Kolthoff Reaction*. Median kepekatan iodin dalam urin bagi responden menunjukkan kekurangan yang serius, iaitu 8.5 µg/L. Ujian korelasi menunjukkan terdapat hubungan yang signifikan antara status sosio-ekonomi dan kepekatan iodin dalam urin (r = -0. 251, $p < 0.05$). Di samping itu, tiada hubungan yang signifikan di antara pengambilan makanan dan kepekatan iodin di dalam urin. Sebagai kesimpulan, penentuan dan pengawalan terhadap status pemakanan iodin adalah penting walaupun untuk populasi yang tidak berisiko terhadap kekurangan iodin, terutamanya untuk wanita mengandung. Pengurusan yang berterusan terhadap iodin, bermula dari awal kehamilan dan berterusan sehingga tempoh menyusu adalah sangat digalakkan. Pendidikan mengenai kesihatan juga perlu diberikan untuk memastikan pengambilan iodin adalah mencukupi disebabkan wanita mengandung merupakan kumpulan yang berisiko terhadap kekurangan pengambilan iodin.