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Low iodine knowledge in a group of Chinese breastfeeding women with adequate iodine status

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Low iodine knowledge may be one of the important risk factors for maternal iodine deficiency. As a result, women experience difficulties in correctly identifying information about the dietary sources and importance of iodine, leading to suboptimal maternal iodine intake. In China, women are provided with standard nutrition education, without a specific focus on iodine by health professionals. They are also not required to take iodine supplements during pregnancy and lactation. Studies investigating the relationship between iodine knowledge and iodine status during pregnancy and lactation are sparse. Therefore, the aim of this study was to assess iodine knowledge and its relationship with iodine status in a group of Chinese breastfeeding women.

In this Women and Infant Nutrition cohort study (WIN), pregnant women from the western part of China were recruited and followed up from their third trimester of pregnancy until first week of lactation. Maternal iodine status was assessed by urinary iodine concentration (UIC). Iodine knowledge was determined using a Chinese iodine knowledge questionnaire. Women were asked to complete the same questionnaire twice, during pregnancy and lactation. Iodine knowledge variables were calculated as total iodine knowledge scores for women. Iodine knowledge scores ranged from 0 to 12. The iodine knowledge scores were categorised into five different levels, which are no knowledge (0 point), poor iodine knowledge (1–3 points), low iodine knowledge (4–6 points), medium iodine knowledge (7–9 points), and high iodine knowledge (10–12 points).

A total of 200 women (mean age of 29.0 ± 4.2 years) completed the study, with the body mass index (BMI) of 21.5 ± 2.8 kg/m2. The overall median UIC during pregnancy and lactation was 112 (85, 134) and 113 (90, 133) μg/L, respectively. The overall mean iodine knowledge scores during pregnancy and lactation were 4.77 ± 2.95 and 4.87 ± 2.96 ($p = 0.004$), indicating low iodine knowledge. Most women had a higher education level (65.5%). The majority of women had none to low iodine knowledge scores (73.0% and 71.0% during pregnancy and lactation, respectively). UIC was not associated with iodine knowledge scores in women during pregnancy and lactation ($p = 0.297$ and $p = 0.956$), whereas education level was significantly associated with iodine knowledge scores ($p < 0.05$).

In conclusion, this study demonstrated a lack of iodine knowledge in women during pregnancy and lactation, highlighting the importance of education level in improving iodine knowledge scores. Future studies should consider investigating the relationship between iodine knowledge and UIC in other population groups living in iodine-sufficient regions to determine if iodine knowledge is an important predictor in maintaining iodine sufficiency.

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