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Can an Educational Intervention Improve Iodine Nutrition Status in Pregnant Women? A Randomized Controlled Trial

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Abstract

Background: Because of their increased need for iodine, pregnant women are among the high-risk groups for iodine deficiency. The purpose of this study was to evaluate the effectiveness of an educational program on the iodine nutrition status of pregnant women.

Methods: In this randomized controlled trial, 100 pregnant women were randomly selected from five healthcare centers in the southern region of Tehran, the capital of Iran. In the intervention group, pregnant women received a four-month educational program, which included two face-to-face educational sessions, using a researcher-designed educational pamphlet in the second and third trimesters, and two follow-up telephone calls. Knowledge, attitude, and practice (KAP) scores, urinary iodine concentration (UIC), and salt iodine content were assessed at baseline and four months after the intervention.

Results: At baseline, there were significant associations between knowledge and attitude ($r = 0.38, p = 0.03$) between practice and UIC ($r = 0.28, p = 0.01$) and between UIC and iodine content of salt ($r = 0.24, p = 0.009$). Although a significant difference was found in mean KAP scores between the two groups after the educational intervention, scores were significantly higher in the intervention group compared with controls ($p < 0.01$). There were no significant differences in UIC and iodine content of salt between the two groups at follow-up.

Conclusions: Despite educational intervention increasing KAP among women regarding the importance of iodine and iodized salt consumption during pregnancy, their iodine status did not improve. Considering the main socio-environmental determinants of iodine deficiency, in particular, the monitoring of salt fortification, prescribing iodine containing supplements as well as improving health literacy in pregnant women seem essential strategies.

Keywords

Author Keywords: [knowledge](#); [attitude](#); [practice](#); [education program](#); [pregnant women](#); [iodine status](#)
KeyWords Plus: [DEFICIENCY DISORDERS](#); [SALT IODIZATION](#); [2 DECADES](#); [KNOWLEDGE](#); [AREA](#); [FOOD](#); [FORTIFICATION](#); [CONSUMPTION](#); [ELIMINATION](#); [SUFFICIENCY](#)

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