Abstract: Introduction: Peak calcium retention by girls has been shown to occur in the prepubertal and early pubertal periods. Diets in many developing as well as industrialized countries are moving towards foods that are poor in calcium. In order to reverse this trend, it is necessary to actively promote healthy behaviors and lifestyles in adolescent girls. School nutrition education programs are critical opportunities for facilitating healthy lifestyles for youth. The Health Belief Model (HBM) is one approach to school nutrition education that is effective in producing at least short-term behavior change to increase dietary calcium intake in adolescents. The purpose of this study was to assess the effectiveness of a nutrition education intervention based on the HBM in increasing adolescent girls’ dietary calcium intake.

Materials and methods: In a Controlled trial, a total of 188 (95 intervention and 93 controlled) female junior high school students in the age group of 14-18 years were selected randomly from two schools of Ahvaz, Iran. Dietary calcium intake was evaluated by a validated and reliable food frequency questionnaire (FFQ) including 38 calcium source food items. Food items categorized in seven food groups: grains; dairy products; fruits; vegetables; meats, eggs and nuts; fats and junk foods. Case group participated in eight nutrition education sessions of half an hour for the period of three months through lecture cum discussion method based on components of the HBM using charts, leaflets, and demonstrations. FFQ were completed at two points for both groups: before the nutrition education and three months after the intervention. Data was analyzed by Paired and Independent sample T-tests by SPSS version 17.

Results: Before the intervention, there was no significant difference between two groups (P>0.05) in terms of food groups intake frequency. Intervention but not control group revealed a significant increase in average dairy products intake frequency after nutrition education compared with pre-intervention (P<0.02) from 2.8±1.8 to 2.9±1.8. Nutrition education could not increase another food group’s intake in intervention group.

Discussion and conclusion: The findings of this study support the feasibility of nutrition education program based on HBM to improve calcium intake through increasing dairy products intake for adolescent girls. It is strongly recommended that nutrition education can be used as an effective measure to bring about favorable and significant changes in the behavior practice of girls who are future mothers and who would be responsible for bringing nutritious balanced diet to their family members.