

Fruit and vegetable consumption and the related factors among Iranian female high school students, Gochan, Iran, 2013

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Sir,

According to World Health Organization's report, there were rapid changes in diets and lifestyles during the past decade because of urbanization, industrialization, economic development, and market globalization, and they were increasing the prevalence of diet-related chronic diseases worldwide.^[1] Increasing vegetable consumption might reduce the risk of various cancers such as gastric cancer and the adenocarcinoma of esophagus.^[2] Furthermore, today's female students are tomorrow's mothers who have a great influence on their children home care^[3] and behavior of their future children as the next generation.

In spite of importance of the subject, there is not sufficient information about the nutritional status, especially the fruit and vegetable consumption (FVC), of developing countries such as Islamic Republic of Iran. Determinants of FVC in adolescents from developed and developing countries may differ because of differences in conditions such as socioeconomic and cultural context. Moreover, each country and population have a unique socioeconomic and cultural condition. So, this study was designed and carried out with the aim to assess FVC and its related factors in Iranian female high school students. This study is expected to provide details of FVC for conducting appropriate intervention for school-based fruit and vegetable programs.

This is a cross-sectional study with a descriptive-analytical approach, which was carried out in 2013. A total of 400 female high school students in Gochan (northwest of Iran) were selected using a multistage sampling method including cluster and simple random sampling. Data were collected using a reliable and valid questionnaire through the interview. Data were analyzed using SPSS18 software and one-way ANOVA.

The mean age of the students was 16.11 ± 1 . The mean portion of FVC was 2.17 ± 1.02 and 2.17 ± 1.24 per day, respectively. The mean score of FVC instead of junk food was 1.29 ± 0.89 (score between 0 and 3). The mean score of vegetable consumption during eating was 1.79 ± 0.80 (score between 0 and 3). The mean score of FVC as snack was 1.92 ± 0.86 (score between 0 and 3). The mean score

of the study about FVC was 1.15 ± 0.90 (score between 0 and 3). The mean score of using natural juice instead of unnatural juice was 1.79 ± 0.98 (score between 0 and 3).

There was significant relationship between behavior and family income ($P = 0.000$, $F = 12.40$), and so the mean score of behavior was increased with increasing family income. There was significant relationship between the field of the study and behavior ($P = 0.015$, $F = 0.015$), so that the highest and lowest mean scores were in humans and experimental fields, respectively. There was significant relationship between father's education and behavior ($P = 0.003$, $F = 4.06$), and so that the highest and lowest mean scores were in students on the basis of their fathers education (with academic education and illiterate, respectively). A significant relationship was between behavior and their mother's education ($P = 0.001$, $F = 4.60$), so that the lowest and highest mean scores were in students on the basis of their mothers' education (either were illiterate and have academic education, respectively). There was significant relationship between behavior and economic status of family ($P = 0.000$, $F = 11.10$), so that the lowest and highest mean scores were in low and high economic status families, respectively.

Fruit consumption is in the moderate level that is consistent with the findings of the Hashemi *et al.*'s study^[4] but is inconsistent with the findings of Hazavehei *et al.*'s study.^[5] In Hazavehei *et al.*'s study, fruit consumption was in undesirable level. Our findings showed that the mean score of vegetable consumption is not in a desirable level, which is consistent with other studies.^[4,5] Moreover, there is a significant association between the FVC and socioeconomic status, so we recommended appropriate intervention, especially educational intervention according to the socioeconomic status of different population.

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