Introduction: one of the most important reasons of nutritional problems in elders is being unaware about nutrition and unfit performance in this category. Implementation of educational programs for promoting knowledge of elders about proper nutrition and their food consumption pattern is necessary. A stage of change model (Transtheoretical model) is one of the recognition and changing methods of dietary regime. This study was conducted to determine the effect rate on nutritional knowledge and stages of fruit and vegetable consumption change of elders, based on stages of change model (transtheoretical model) in Gilane-gharb county in 2010.

Methods and materials: the present quasi-experimental study, was implemented with participation of 150 elders aged sixty and above in two groups (experimental and control) from Gilane-gharb county. Validity of questionnaires was assessed by face & content method. Test retest and internal consistency methods were used for reliability of stages of change questionnaire and for nutritional knowledge scale respectively. The internal consistency of knowledge scale was high (cronbach alpha = .83). After educational intervention, data was analyzed using SPSS17 by use of central indexes, independent and paired T-test, one way ANOVA, chi-square and Friedman nonparametric test.

Results: before educational intervention, differences between experimental and control groups were not significant. Result showed that mean score of knowledge in experimental group promoted (from 7.82±2.4 to 10.4±2.34) after educational intervention (p<0.001). Mean score of nutritional knowledge of city residents better than rural ones (p=0.025). Fruit and vegetable consumption stages of change comparing with before intervention had significant difference (p<0.001 and p=0.011 respectively) and was pushed to motivational (preparation stage) and more active (action) stages.

Discussion and conclusion: based on findings of this study, application of educational program based on stages of change model had a positive effect on nutritional knowledge and stages of change of fruit and vegetable consumption. Whereas, health of elders is healthy priority of community, it seems that developing and application of such intervention for promoting the nutritional behavior of this group is necessary.