

M. H. BAGHIANIMOGHADAM<sup>1</sup>,  
S. FAZELPOUR<sup>2</sup>,  
A. NADGARZADAH<sup>3</sup>,  
H. FALAHZADAH<sup>4</sup>,  
B. BAGHIANIMOGHADAM<sup>5</sup>

# A survey about the attitude of peoples about consumption of fast foods, Yazd, Iran

PROGRESS IN NUTRITION  
VOL. 15, N. 4, 274-279, 2013

## TITOLO

Un studio sulla tendenza al consumo di fast food a Yazd in Iran

## KEY WORDS

Attitudes, consumption, fast food, Yazd

## PAROLE CHIAVE

Tendenza, consumo, fast food, Yazd

<sup>1</sup>Professor of Health Education, Faculty of Health, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.

<sup>2</sup>Students of MSc of Health Education, Faculty of Health, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

<sup>3</sup>Assistant Professor of Nutrition, Faculty of Health, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.

<sup>4</sup>Associate Professor of Biostatistic, Faculty of health, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

<sup>5</sup>Research Consultant and Resident in Orthopedic surgery, Department of Orthopedic Surgery, Babol University of Medical Sciences, Babol, Iran

Address for correspondence:

Dr. Shokouh Fazelpour  
Faculty of health, Shahid Sadoughi University of Medical Sciences, Daneshjoo BLVD, Yazd, Iran.  
Tel: +98-351-6240691-5  
E-mail: pars.pajoooh.group@gmail.com

## Summary

*Introduction:* The use of high calorie food and fat such as fast foods and imbalance between energy intakes increases the risk of obesity, hypertension, cardiovascular diseases, diabetes type two and other diseases. Obesity and its complications is one of the most public health problems worldwide. The aim of this study is to determine the attitude of people of Yazd city about consumption of fast foods. *Materials and Methods:* This was a cross-sectional descriptive study. Totally 600 residents of Yazd city were over 18 years selected by cluster sampling among different distinct of the city. The data was collected by a researcher made questionnaire which its validity and reliability was approved by a team of experts and pilot testing. Data was gathered by the researcher interview during home visits. After completion of questionnaires, all gathered data were transferred into SPSS-15 software and analyzed. *Results:* From all 600 participants 66% were women and 34% were men. The data of the study showed that the attitude of men on using the fast food is more positive than women and there is significant difference between their attitude ( $P < 0.01$ ). There was significant difference between the attitude of samples and their age groups ( $P = 0.002$ ) as the mean grade scores of participants at age group of 18-25 years old was more than other groups. *Conclusions:* According to the results, the attitudes of participants, influences on consumption of fast foods and can increase the weekly average used fast foods. Results from Yazd city shows the high tendency to using fast foods and this is a major health concern for policy makers which needs emergency consideration on changing the nutritional habits.

## Riassunto

*Introduzione:* Il consumo di cibo ad elevato contenuto calorico e di grassi, come il "fast food", e lo squilibrio relativo all'assunzione energetica aumenta il rischio di obesità, ipertensione, malattie cardiovascolari, diabete di tipo due ed altre patologie. L'obesità e le sue complicanze sono uno dei maggiori problemi di salute pubblica in tutto il mondo. Lo scopo di questo studio è quello di determinare la tendenza al consumo di fast food nella città di Yazd, in Iran. *Materiali e metodi:* Studio descrittivo a sezione trasversale. Sono stati selezionati con un campionamento a grappolo da diversi distretti della città

un totale di 600 residenti della città di Yazd, che avevano più di 18 anni. I dati sono stati raccolti da un ricercatore tramite questionario la cui validità e affidabilità è stato approvata da un team di esperti e da test pilota. I dati sono stati raccolti dal ricercatore tramite colloquio durante le visite a domicilio. Dopo il completamento dei questionari, tutti i dati raccolti sono stati trasferiti nel software SPSS-15 e analizzati. *Risultati:* Di tutti i 600 partecipanti il 66% erano donne e il 34% erano uomini. I dati dello studio hanno mostrato che la tendenza degli uomini al consumo di fast food è più positiva rispetto alle donne e che c'è una differenza significativa tra le loro inclinazioni ( $p < 0,01$ ). C'era una differenza significativa tra la tendenza dei campioni e il loro gruppo di età ( $p = 0,002$ ), come i punteggi di qualità medi dei partecipanti della fascia di età 18-25 anni, più che di altri gruppi. *Conclusioni:* In accordo con i risultati, la tendenza dei partecipanti influisce sul consumo di fast food e può aumentare la media settimanale di fast food consumati. I risultati provenienti dalla città di Yazd mostrano la forte tendenza al consumo di fast food e questo rappresenta un problema sanitario importante per i responsabili politici che devono considerare un'emergenza necessaria cambiare le abitudini alimentari della popolazione.

## Introduction

The concept of health is different in various cultures and communities. Based on World Health Organization definition Health is welfare of complete physical, mental, social, and not merely the absence of disease or injury (1, 2). Therefore, the good nutrition is needed for good health through the life, before the birth to the older age (3, 4). The use of high calories food and fat such as fast foods and imbalance between energy intakes increases the risk of obesity, blood pressure, cardiovascular diseases, diabetes type two and other diseases. Obesity and its' complications is one of the most public

health problems worldwide (5-9). The rate of high weight and obesity in Iran is about 13.3-24.8% and 7.7-8% respectively (10-13). The change of life style, sedentary life, working of women, increasing the unmarried people, best taste of fast foods and low price of fast foods are some reasons of using the fast foods (1, 2).

About a quarter of American adults consume fast foods each day (14, 15). It is estimate that in 1970, about 20% and in 1995, about 40% of foods cost has been spent for fast foods and about 14% of total body energy is from fast foods (16). The fast foods provide part of the proteins, carbohydrate and some vitamins, but have low calcium, vitamin

C and A, fiber quantity but high in fat, especially saturated fat and cholesterol (16). The materials in fast foods and methods of cooking them can increase the risk of cancers (17). We can prevent and control many diseases by changing the food habit and attitude of peoples, so the aim of this study is to determine the attitude of people of Yazd city about consuming fast foods and mean weekly fast food consumption.

## Materials and methods

A cross-sectional descriptive study implements on 600 participants over 18 years old of Yazd city after

approval of institutional ethics committee. Participants were selected by cluster sampling. The city was divided to six main regions which from every region 20 avenue were selected. Interviewers went to each of avenues and completed the questionnaire from families who accepted to participate in the study. Interviewer was obligated to complete questionnaire from all determined avenues. The data was collected by a researcher designed questionnaire during home visits. The questionnaire had three sections:

1-demographic questions;

2-twenty questions on attitude of participants about fast foods, the Range of attainable scores in this section was 30-83 and the lower mean scores indicates a negative attitude to using fast foods;

3-questions about consuming the fast foods, that the Range of attainable scores in this section was 0-14.

In this study the fast foods were sandwich, pizza, burgers, falafel, meat products such sausage and fried potatoes and canned foods that were simply buyable.

Internal and external validity of questionnaire was confirmed by a team of experts in nutrition and health education; and also by a pilot testing on 20 peoples who were not attended in the main study (Alpha chornbach = 0.69).

After completion of question-

naires, all gathered data were transferred into SPSS software and analyzed under ANOVA, Chi square, T-test and Pearson tests.

## Results

Totally 600 participants included in the study. About 66% (n=396) were women and 34% (n=204) were men. 22.5% were single while other 77.5% were married. About 68.9% (n=413) of participants had less than twenty years of graduation while 31.2% (n=187) had academic graduation. About 4.5% of participants were low weight, 47.6% normal, 32.4% over

weight and 15.5% were obese.

About 24.7% of participants were 18-25 years old, 22.2% were 25-30, 16.5% were in 35-40 years and 17% had more than 40 years old.

Table 1 shows that the attitude of men towards using the fast food is more positive than women and there is significant difference between their attitude ( $P < 0.01$ ). There was a significant difference between the attitude of samples and age groups ( $P = 0.002$ ) and the mean grade scores of participants in age of 18-25 years old was more than other groups.

There was significant difference between the attitude of samples and their marital status ( $P = 0.007$ )

**Tabella 1** - The mean grade scores of attitude of participant to consumption of fast food based on sex, age, marital status, education and weight

Attitude variables		N	%	Mean	SD	P
Sex	male	204	34	55.21	7.01	0.01
	female	396	66	53.8	6.92	
Age	18-25	148	24.6	56.8	6.67	0.002
	25-30	133	22.17	54.47	6.77	
	30-35	118	19.67	52.92	7.5	
	35-40	99	16.5	53.34	6.62	
	>40	102	17	53.91	6.96	
Marital status	single	135	22.5	55.71	6.85	0.007
	married	465	77.5	53.86	6.97	
Education	lower than diploma	413	68.8	54.96	7.04	0.003
	University graduation	187	31.2	53	6.82	
Weight	low weight and normal	312	52	54.98	6.88	0.009
	Over weight and obesity	288	48	53.49	6.98	

and the mean grade scores of singles was more than married ( $55.71 \pm 6.85$  versus  $53.86 \pm 6.97$ ). There was significant difference between the attitude of participants and their level of education (P-value=0.003) and the mean grade scores of participants with graduation lower than 12 years was more than who had university graduation.

The mean grade scores for attitude of participants with low weight and normal weight was more than over weighted or obese participants (P-value=0.009).

The data of table two showed the mean grade scores weekly using the fast foods was  $0.8 \pm 1.42$  and

consumption of men was more than women and there was significant difference between the weekly consumption and age groups (P=0.001) which the mean grade scores of 18-25 years old was more than other groups.

There was significant difference between the weekly consumption of samples and their marital status (P=0.001), the mean grade scores of singles was more than married participants ( $0.63 \pm 1.225$  Vs  $1.45 \pm 1.85$ ). There was significant difference between the weekly consumption of participants and the level of education (P=0.003). Mean grade scores of participants with lower than 12 years gradua-

tion was lower than samples with university graduation.

The consumption of fast foods in low and normal weighted participants was more than who were over weighted or obese which the difference was significant (P-value=0.005).

The results showed that the weekly consumption of students and unemployed was more than others job groups.

## Discussion

As the technology is developing and the communicable diseases are controlling better than before, non communicable diseases has been greatly expanded. Bad habits, unsuitable lifestyle and poor nutrition have major impacts on such diseases.

The data of present study revealed that the mean grade attitude scores of men is more than women, and men had more positive attitude towards the consumption of fast food and weekly consumption of fast food of men was apparently more than women. Generally 92.6% of men and 89.9% of women used fast foods. These results is same as the results of many previous studies (14, 18-23). Because most of men do not have the skill to prepare traditional foods or are very busy and have no enough time, prefer to use fast

**Tabella 2** - The mean grade scores of weekly consumption of fast food of participant based on sex, age, marital status, education and weight.

Weekly consumption variables	N	%	Mean	SD	P	
Sex	male	204	34	1.05	1.5	0.003
	female	396	66	0.69	1.36	
Age	18-25	148	24.6	1.33	1.78	0.001
	25-30	133	22.17	0.97	1.6	
	30-35	118	19.67	0.49	0.76	
	35-40	99	16.5	0.44	0.65	
	>40	102	17	0.58	1.5	
Marital status	single	135	22.5	1.45	1.85	0.001
	married	465	77.5	0.63	1.22	
Education	lower than diploma	413	68.8	0.7	1.48	0.003
	University graduation	187	31.2	1.07	1.12	
Weight	low weight and normal	312	52	0.97	1.59	0.005
	Over weight and obesity	288	48	0.64	1.2	

foods. The results of Some studies (14, 24) showed that have lower tendency to eat fattening foods and this can explained the lower fast food consumption by women. Our results showed that mean grade scores of attitude of participants between 18-25 years is more than other age groups. It also became clear that this approach has an impact on the consumption of fast foods by mentioned age group, so that the average weekly consumption of fast foods in this age group is more than other age groups. The results showed that with increasing the age, the consumption of fast foods will decrease. The results of studies by Mohr (21), Satia (25), Reydell (26) like many other studies (19, 20, 26, 27, 29, 30) are same as our results. The young people are healthy and happy and have not enough knowledge and experience to a healthy diet. They believed that chronic diseases such as hypertension and diabetes occur at old ages and have not right concept that the process of such diseases starts from childhood and adolescence and one of the major risk factors are consumption of fast foods and fatty foods. In present study mean grade scores of attitude towards fast foods in participant with level of education in high school and lower was more than other groups, but the average of weekly con-

sumption of fast foods in participants with academic education was more than others. These results are consistent with results of Reydell (26). The data of some other studies in this field are inconsistent with present study (20, 26, 29,31) and they concluded that people with less education, consume more fast foods. Our survey revealed that mean grade scores of attitude to fast foods in singles was more than married peoples, resulting in higher average weekly consumption of fast foods by singles than married. The results of Satia (25), Dave (18) and many others studies (19, 24, 25, 27, 29, 30) in this filed are consistent with our results. This possibly is due to more business in singles, lack of skill in cooking foods and not attention to healthy diet. The consumption of fast foods in participants with low and normal weight was more than participants with overweight or obese people (P-value=0.005). The mean grade scores of attitude for low and normal weighted is more than others. The results in this field is same as the results of Satia (25) and other studies (19, 24, 32, 33). Probably these groups of people have higher fast food consumption because they don't fear of to become obese or want to be obese. Our study was a cross sectional survey and this was a limitation. It is needed to design a cohort study

to examine the relationship between demographic, social and cultural factors.

## References

1. Pereira M A , Kartashov A I , Ebbeling C B, Van Horn L , Slattery M L , Jacobs Jr DR, Ludwig DS. Fast-food habits, weight gain, and insulin resistance(the CARDIA study): 15-year prospective analysis. *www.thelancet.com* Vol 365 January 1, 2005
2. Shanthy A. Bowman B, Vinyard T. Fast Food Consumption of U.S. Adults: Impact on Energy and Nutrient Intakes and Overweight Status. *Journal of the American College of Nutrition*, Vol. 23, No. 2, 163-168 (2004).
3. Karimi H, Sam Sand Sagadi P. Evaluation of physical and nutrition status of primary school students of Ramsar city ,Iran. *Journal of medical university of Babol* .2008; 10(1):67-76.
4. Williams SR. *Basic nutrition diet therapy*, 11th ed, London, Mosby Co 2001; pp: 241
5. Valntallie T.B.(1998):Predicting obesity in children and adolescent in the United states. *Nutr, Rev*:56:154
6. AHA (American Heart Association) *Heart and Stroke facts*.1994.Heart and stroke facts. dallas, TX: Author
7. CHAN. J. M, Rimm, E. B. Coldi TZ, G. A. Stampfer, M. J. & Willett, W. C. (1994) obesity, fat distribution, and weight gain as risk factors for clinical diabetes in men. *diabetes care*. 17. 961-969
8. Manson J.E, colditz G.A, Stampeer M.J Willett, W.C. Rosner, B. Monson, R.R. speizer, F.E. & Hennekens. C.H. (1990). A prospective study of obesity and risk of coronary heart disease in women. *New England Journal of medicine*, 322, 882-889
9. Manson J.E. Willett, W.C. stampfer. M.J. Coldi TZ, G.A. Hunter, D.I. & Hankinson, S.E.(1995). Body weight and mortality among women. *New*



- England Journal of medicine, 333, 677-685
10. Ziaee V, Kelishee A, Ardalan G, Ghiratmand R, Magdadah SR and Motaghian M. The rate of physical activity in Iranian students. *The Iranian journal of children diseases*. 2005; 16(2)
  11. Mozafari H, Nabaee B.A survey about fat and over weight in girl students in primary school of Tehran *Journal of Gahade- daneshgahy*. 2002; 1(4): 15-19.
  12. Dorosty AR, Siassi F, Reilly JJ. Obesity in Iranian children. *Arch Dis child*. 2002; 87: 388-91
  13. Kelishadi R, Hashemipour M, Sarraf-Zadegan N, et al. Obesity and associated modifiable risk factors in Iranian adolescents: IHHP-HHPC. *Inter Pediatr*. 2003; 45(4): 435-42
  14. Kristin L. Morse, Judy A. Driskell. "Observed sex differences in fast-food consumption and nutrition self-assessments and beliefs of college students" *Science Direct Journal, Nutrition Research* 29 (2009) 173-179
  15. Schlosser E. *fast food nation*. New York: Houghton Mifflin; 2001/2003
  16. Kim KW, Shin EM, Moon EH. "A Study on Fast Food Consumption, Nutritional Knowledge, Food Behavior and Dietary Intake of University Students.
  17. Byers, T. (1993). Dietray trends in the united states: Relevance to cancer prevention. *cancer* 72.1015-1018
  18. Dave JM, An LC, Jeffery RW, Ahluwalia JS. "Relationship of attitudes toward fast food and frequency of fast-food intake in adults." *Obesity (Silver Spring)*. 2009 Jun;17(6):1164-70. Epub 2009 Feb 26
  19. S. Paeratakul, D.P. Ferdinand, C.M. Champagne, D.H. Ryan and G.A. Bray, Fast food consumption among us adults and children: Dietary and nutrient intake profile, *J Am Diet Assoc* 103 (2003), pp. 1332-1338.
  20. K. Glanz, M. Basil, E. Maibach, J. Goldberg and D. Snyder, Why Americans eat what they do: Taste, nutrition, cost, convenience, and weight control concerns as influences on food consumption, *J Am Diet Assoc* 98 (1998), pp. 1118-1126.
  21. P. Mohr, C. Wilson, K. Dunn, E. Brindal and G. Wittert, Personal and lifestyle characteristics predictive of the consumption of fast foods in Australia, *Public Health Nutr* 10 (2007), pp. 1456-1463.
  22. S.A. French, M. Story, D. Neumark-Sztainer, J.A. Fulkerson and P. Hannan, Fast food restaurant use among adolescents: Association with nutrient intake, food choices and behavioral and psychosocial variables, *Int J Obes Relat Metab Dis* 25 (2001), pp. 1823-1833.
  23. Katherine W Bauer\*, Nicole I Larson, Melissa C Nelson, Mary Story and Dianne Neumark-Sztainer. Socio-environmental, personal and behavioural predictors of fast-food intake among adolescents. *Public Health Nutrition*: 12(10), 1767-1774.
  24. Judy A. Driskell, Brian R. Meckna, Narissa E. Scales. "Differences exist in the eating habits of university men and women at fast-food restaurants"
  25. J.A. Satia, J.A. Galanko and A.M. Siega-Riz, Eating at fast-food restaurants is associated with dietary intake, demographic, psychosocial and behavioural factors among African Americans in North Carolina, *Public Health Nutr* 7 (2004), pp. 1089-1096.
  26. Sarah A. Rydell, Lisa J. Harnack, J. Michael Oakes, Mary Story, RD, Robert W. Jeffery, Simone A. French. "Why Eat at Fast-Food Restaurants: Reported Reasons among Frequent Consumers" *Journal of the American Dietetic Association* Volume 108, Issue 12, December 2008, Pages 2066-2070
  27. S.A. Bowman and B.T. Vinyard, Fast food consumption of US adults: Impact on energy and nutrient intakes and overweight status, *J Am Coll Nutr* 23 (2004), pp. 163-168.
  28. M.A. Pereira, A.I. Kartashov, C.B. Ebbeling, L. Van Horn, M.L. Slattery, D.R. Jacobs Jr and D.S. Ludwig, Fast-food habits, weight gain, and insulin resistance (the CARDIA study): 15-year prospective analysis, *Lancet* 365 (2005), pp. 36-42.
  29. G.X. Ayala, K. Mueller, E. Lopez-Madurga, N.R. Campbell and J.P. Elder, Restaurant and food shopping selections among Latino women in Southern California, *J Am Diet Assoc* 105 (2005), pp. 38-45.
  30. H.M. Blanck, A.L. Yaroch, A.A. Atienza, S.L. Yi, J. Zhang and L.C. Masse, Factors influencing lunchtime food choices among working Americans, *Health Educ Behav* (2007) June 29.
  31. S A French, L Harnack and R W Jeffery. "Fast food restaurant use among women in the Pound of Prevention study: dietary, behavioral and demographic correlates" *International Journal of Obesity*. October 2000, Volume 24, Number 10, Pages 1353-1359
  32. Cameron AJ, Welborn TA, Zimmet PZ, Dunstan DW, Owen N, Salmon J, et al. Overweight and obesity in Australia: the 1999-2000 Australian Diabetes, Obesity and Lifestyle Study (AusDiab). *Medical Journal of Australia* 2003; 178(9):427-32.
  33. King T, Kavanagh AM, Jolley D, Turrell G, Crawford D. Weight and place: a multilevel cross-sectional survey of areal level social disadvantage and overweight/obesity in Australia.