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Attitudes of Turkish Blue Collar Workers Toward Healthy Nutrition

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Abstract: This study is aimed at determining the behaviors in terms of healthy nutrition blue collar workers. 300 workers in total, 150 of which are women and 150 of which are men who work in textile factories in Bursa province were included in the content of the study. The socio-demographic characteristics and behaviors in terms of healthy nutrition of the workers who were included in the study were taken into consideration. The data were evaluated according to SPSS 11.0 package software and also chi square test, independent samples test, one-way ANOVA analysis and sheffe test were used. According to the obtained results, it was detected that the majority (49.3%) of the workers were in the 21-31 age range, were graduates of high school (44.3%) and were married (65.3%). It can be seen that the maximum score that workers could obtain was 148, instead of the total possible score of 165. This shows that approximately 71.5% of the total possible score was obtained by the workers.

Key words: Blue collar worker, healthy nutrition, healthy eating habits

Introduction

Nutrition is the intake and use of nutrients for the purposes of survival, growth, development and good health. The requirements for adequate and balanced nutrition are the sufficient intake of each nutrient necessary for the growth, renewal and functioning of the body and the appropriate use of these. Healthy nutrition is ensured by the adoption of correct attitudes and habits. Similar to all other individuals, blue collar workers also need healthy nutrition for their own health, for a healthy society and for increased health and life standards (Canbolat, 1990; Kumartaşlı, 2006).

Nutrition is among the very first factors affecting workers' speed of production. The physical and mental development of any individual who has insufficient, unbalanced or excessive intake of nutrients will suffer. It will lead to lack of talent, health and strength. When the nutrients consumed do not bring the energy needed by the work, the physical power needed for production suffers and production falls. This adversely affects individuals' interest and concentration, which makes it difficult to educate them and may lead to work related accidents. Additionally, insufficient nutrition also affects the immune system due to inadequate intake of protein, vitamins and minerals, causing illnesses and failure to work and even complications leading to death in extreme cases. These have been validated through studies conducted in the field (Canbolat, 1990; Saltık, 1995; Tanır *et al.*, 2001).

One of these studies has found the rate of missing a meal to be 40,4% amongst mine workers. 65,3% of these workers said they missed lunch and 22,9% said they missed breakfast (Bilici, 2006). Povey *et al.* (1998) studied the healthy and unhealthy eating habits of workers with 39 statements. Fruit and vegetable

consumption emerged as "healthy eating habits" whereas sugar, meat, fat and junk food consumption emerged as "unhealthy eating habits". Judy *et al.* (2000) conducted a study called "Australian Natural Workplace Health Project" and found that 12% of workers consumed alcohol, 26% smoked, 74% consumed 1 portion of fruit and vegetables daily. In a different study conducted in Germany, Reime *et al.* (2000), studied the health condition and nutritional habits of 1641 metal workers. The results indicated that most workers consumed healthy and unhealthy foods and seemed to suggest that nutrition was not linked to work status, marital status or the number of children. Similarly, Akamatsu *et al.* (2005), investigated the attitudes of 1155 Japanese workers toward healthy nutrition. They used a form consisting of 21 attitude statements as their research technique and found that 4 of these statements were marked as "extremely important": "sufficient and balanced eating", "consuming fresh vegetables", "not eating late at night" and "diversifying the foods eaten". Constance (2003) established interview groups with 40 adults aged between 25 and 45 in order to identify their attitudes towards healthy nutrition and found that they believed in the importance of "maintaining the current body weight" and "combining activity with a balanced diet".

The present study aims to identify blue collar worker attitudes toward healthy nutrition.

Materials and Methods

The study sample included 300 workers (150 male; 150 female) working in 3 different textile factories in the Turkish city of Bursa. Data was collected by using "questionnaires" and face-to-face interviews.

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Table 1: Mean scores obtained by workers on the attitude statements

Attitude statements	±sd
1. Breakfast is an important meal.	4.62±0.66
2. Energy intake must reflect age, sex and physical activity.	4.20±0.82
3. An adult needs two meals a day.	3.48±1.08
4. A minimum of 3 to 5 portions of fruit and vegetables are needed daily.	3.02±1.10
5. Fruit and vegetables should not be consumed when not in season.	3.66±1.10
6. Fresh fruit juice can always be preferred to the fruit itself.	3.09±1.26
7. Refined/processed foods should be avoided.	3.86±1.02
8. White bread is more useful than brown bread.	3.25±1.05
9. Bulgur should be preferred over rice.	3.01±1.05
10. The skin of poultry should be removed before eating.	3.34±1.16
11. Adults do not always need to consume red meat.	2.69±1.07
12. It is enough to eat fish once a month.	3.11±1.25
13. Extra oil is not needed when cooking meat.	2.97±1.02
14. Full cream yoghurt and milk is more useful for adults than low-fat versions.	2.80±1.09
15. Vegetable oils should be preferred over butter.	3.27±1.21
16. Soft margarine can be used instead of vegetable oils.	3.26±1.09
17. The type of oils consumed affects the development of heart and vein diseases.	4.05±0.99
18. People with high cholesterol levels should prefer vegetables.	3.91±0.95
19. A daily diet should include oily seeds (walnuts, hazelnuts, almonds).	3.44±1.04
20. Salt intake is not related to health.	2.30±1.13
21. Frying is not a healthy cooking method.	3.85±0.98
22. All people need to drink at least 1 liter of water every day.	4.29±0.80
23. In order to make use of all nutrients, it would be good to diversify the foods eaten.	4.13±0.72
24. Foods that require more stages when cooking and preparing are tastier but less healthy.	3.48±0.97
25. It is important for good health to eat small amounts frequently.	4.13±0.85
26. In order to be healthy, one should combine an adequate and balanced diet with vitamin and mineral supplements.	2.46±1.09
27. It is bad for health to drink more than 2 cups of coffee per day.	4.01±0.85
28. It is not necessary to limit daily tea consumption.	3.39±1.18
29. Alcohol consumption is harmful to health.	4.30±1.02
30. Herbal teas are good for health.	4.09±0.74
31. Foods should not be eaten fast.	4.25±0.74
32. In order to be healthy, it is important to eat at regular hours.	4.31±0.70
33. Food should not be consumed too late at night.	4.34±0.74

The questionnaire consisted of 33 statements written to identify worker attitudes toward healthy nutrition. These statements were based on the previous work of Povey *et al.* (1998) and Akamatsu *et al.* (2005). Some statements included negative sentence sets. Responses to the positive items were scored as follows: "agree completely (5)", "agree (4)", "undecided (3)", "disagree (2)" and "disagree completely (1)". In negative statements, reverse scoring was made. The total possible score was 165.

Data was evaluated by using the "Statistical Package for Social Sciences (SPSS) Version 11" package. For the sex variable, "independent samples t-test" was used to evaluate the attitude scores toward healthy nutrition. In other variables (age group, education), "One-Way Anova" analysis and "Scheffe Test" was used.

Results and Discussion

General information about the blue collar workers: It was seen that 58.7% of the female workers were in the 21-31 age group and 41.3% of males in the 32-43 age group. Among the females, 40.0% were high school graduates, 27.3% secondary school graduates, 16.7% primary school graduates. Among the males, these

percentages were 44.7, 20.7 and 23.3%, respectively. The majority of workers were married (65.4%) and the majority of families had 3 or 4 family members (61.0%). The income of the majority (81.7%) was limited to their wages and the majority 89.0% had no significant health problems. Among the study sample, the proportion of those who said they had never played a sport was 67.0%. The majority of those who said they played a sport mentioned "walking".

Blue collar worker attitudes toward healthy nutrition:

The study used 33 attitude statements about healthy nutrition. Some of these statements were related to knowledge about nutrition and the others were about behaviors. The mean scores of statements are given in Table 1.

As can be seen from the table, the items that scored highest were "Breakfast is an important meal" (4.62±0.66), "Food should not be consumed too late at night" (4.34±0.74), "In order to be healthy, it is important to eat at regular hours" (4.31±0.70), "Alcohol consumption is harmful to health" (4.30±1.02), "All people need to drink at least 1 lt water every day" (4.29±0.80), "Foods should not be eaten fast" (4.25±0.74).

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Table 2: Mean scores obtained by workers on the attitude statements for the different variables

sex	n	Mean±SEM	Minimum	Maksimum
female	150	118.03±9.25	81	148
male	150	118.17±9.38	95	146
		f : 0.759 sig: 0.384		
Age group				
< 20	19	117.31±9.60	95	137
21-31	148	118.86±8.75	91	148
32-42	105	117.18±9.96	81	139
> 43	28	118.07±9.60	100.0	135
		f : 0.719 sig : 0.542		
Educational status				
Illiterate	3	119.67±3.79	117	124
Primary school	60	115.32±8.05	99	141
Secondary school	72	115.46±8.63	81	135
High school	133	118.70±8.72	90	138
University *	32	126.69±10.30	105	148
		f : 11.094 sig. : 0.000		

SEM: Standard error of mean

The frequency of eating, energy per meal, the amount of nutrients and their proportion to one another play a crucial role in balancing the physiological balance of the body and protecting organs. They also help prepare the individual to cope with the pressures of daily life, get rid of tiredness, think healthily and prevent diseases. For the metabolism to work properly and considering daily life conditions, foods are suggested to be divided into a minimum of 3 meals per day and that these meals are 4-5 hours apart (Anonymous, 2004). Missing meals is perhaps the worst eating habit in our age and if it becomes a long-time habit, it may prevent adequate and balanced nutrition. When a meal is missed, the amount of water and protein in the body decreases and the amount of fat increases. Additionally, missing a meal also slows down the basal metabolism and decrease energy consumption. Not having breakfast or staying hungry until lunch stops the organism from working (Arslan *et al.*, 1999). However, as breakfast is the first meal of a day after a long period of hunger, missing the breakfast means that the nutrients necessary for the brain are lacking (Bilici, 2006).

On the other hand, excessive use of alcohol may cause lack of concentration, memory loss, hindrance to physical activities, heart failure, indigestion, various kinds of cancer, low blood sugar and anemia. A finding from recent research shows that alcohol intake leads to vitamin deficiency (Kumartaşlı, 2006).

Another serious harmful condition may be dehydration which occurs when the body has less water than it needs. When the body has only 1.0% less water than it needs, excessive thirst appears; 5.0% less leads to a temperature; and 10.0% less leads to bruising and more serious problems. As a general rule, an average person should drink between 1.5 and 2.5 liters of water daily in order to restore the water lost from the body.

As can be seen from the table, the lowest scoring statements were, "Salt intake is not related to health"

(2.30±1.13), "In order to be healthy, one should combine an adequate and balanced diet with vitamin and mineral supplements" (2.46±1.09) and "Adults do not always need to consume red meat" dir (2.69±1.07).

Salt intake is in fact closely related to good health. More intake than needed may lead to hypertension or failure in its treatment. High blood pressure is a common disease in cultures where salt intake is traditionally high (Akpolat, 2007). Secondly, a person on an adequate and balanced diet does not need vitamin or mineral supplements. Also, it is healthier for adults to meet their needs for meat from poultry and fish instead of red meat. Table 2 presents the mean scores with respect to the variables of sex, age group and education status.

It can be seen that the maximum score that workers could obtain was 148, instead of the total possible score of 165. This shows that approximately 71.5% of the total possible score was obtained by the workers. On the other hand, no significant difference was found between women and men as regards attitudes toward healthy nutrition and the mean scores of the two groups are very similar ($p>0.05$). When the table is analyzed with respect to age groups, it can be seen that the highest score was obtained by the 21-31 year-olds. Although the scores obtained by other age groups were lower, no statistically significant difference was found ($p>0.05$). When education was considered, college graduates were seen to score the highest (126.69±10.30). Statistical analyses showed that there was a significant difference between the scores of college graduate workers and others ($p<0.01$), emphasizing the importance of education once again.

Conclusion: Nutrition is the foundation for the basic needs of humans. When favorable climatic conditions are present, humans may live without clothing or shelter but not without food. The nutritional habits of working people are a significant factor in their productivity.

Therefore, workers may be given in-service education about the importance of healthy nutrition and controlled in order to ensure the continuation of positive eating habits. Print and visual media may be good options for practical and long-lasting nutritional education. Workers and their families would particularly benefit from an education focusing on the nutritional needs of people engaged in different types of work, the nutritional value of different types of food, the relationship between nutrition and health and productivity and the effects of processes of preparing, cooking and preserving food on its nutritional value. With the help of such an educational program, it may be possible to correct the wrong behavior of productive groups such as workers and thus encourage positive attitudes toward healthy nutrition. Further, the situation of workers and the sources of their problems should be studied and solutions sought accordingly.

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