

Influences of Environmental Odors On The Results Of Exams

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SUMMARY:

Human being take and give odors these are important biologically to chemical environment. The influence of environmental odors to results of exam were investigated in medical students. There were no negative effect. The positive effect was not imoprtant statistically.

Key Words: Environmental odors, environmental effects.

ÖZET

ÇEVRESEL KOKULARIN SINAV SONUÇLARINA ETKİSİ

İnsan, kimyasal çevreye biyolojik açıdan önemli kokular alır ve verir. Çevresel kokuların sınav sonuçlarına etkileri tip öğrencilerinde araştırıldı. Olumsuz bir etki saptanmadı. Olumlu etki ise istatistiksel açıdan anlamlı değildi.

Anahtar Kelimeler: Çevresel kokular, çevresel etkiler.

The sense of smell is very important especially for animals. they can exactly localize the objects with only their odors (1,2). The environmental odors can effect the mental functions of human being too (3).

Some of odors are used for to treat of some diseases by aromatherapists (4). Unfortunately, some odors worsen the asthmatic patients and occur immunological reactions (5,6). Perfumes and colognes are most frequently mentioned offenders (5).

Environment with bad odors can make people aggressive (3, 7). It was reported that the odor of environment has an important effect on remembering function of human being. If the odor of the learning room is same the odor of the remembering room, individuals can remember better (8).

Ehrlichman and Halpern were used odor to produce positive and negative experiences with minimal cognitive involvement. College women recalled memories cued by neutral words while exposed to a pleasant odor, unpleasant odor and no odor. Subject than rated their memories as to how happy or unhappy the events recalled were at the time they occurred. They reported that, subjects

in the pleasant odor condition produced a significantly greater percentage of happy memories than did subjects in the unpleasant odor condition (9). According to Bowley and colleagues; bad odors could not effect negatively psychological functions in spite of the assertion of the persons (10).

In our medical school, because of the both; the excess of the students and insufficiency of the classes, some students were examining in the student dining room. So the complaints of the students who examined in the dining room; we decided to investigate that to examination in dining room effects the success or not.

MATERIAL AND METHOD

This study was performed with 224 second year students of Medical School of Trakya University where integrated medical education was given. The students were taken the midterm exams in four classrooms and the student dining room. In the dining room where 500 students take dinner everyday; 34 students (Group A) were taken in first exam, and 36 students (Group B) in second exam. Examinations were begun at 15.00 o'clock P.M. The dining room had no air-cleaner. Both,

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qualitative and quantitative odor analysis couldn't made.

Physiology and biochemistry questions were answered all of the students were analysed with student t test.

Table 1: The mean physiology and biochemistry points of Group A, B and all student

Group	Physiology mean midterm exam points		Biochemstry mean midterm exam points	
	1.Exam	2.Exam	1.Exam	2.Exam
A	47.07±11.62*	47.94±13.16	50.71±20.71*	55.06±16.42
B	43.96±11.55	51.25±14.47*	50.00±16.50	59.03±18.20*
All student	45.74±11.45	49.51±13.75	48.10±17.88	58.55±17.67

RESULT AND DISCUSSION

The mean points of Group A, B and all students were given in the Table 1.

The students in Group A were taken the first exam in the dining room. The mean physiology and biochemistry points of this group are higher than the mean points of all students. The mean points of 2. exam of Group A were lower than the mean points of all students. But the difference is not meaningful like as in 1. exam.

These results are shown that the environmental odor don't influence the results of exams negatively.

Oppositely, it has positively but not statistically important effects on the performance. This is concordant with both; the results of Smith and his colleagues and Bowley and his colleagues (8, 10). It may be the cause of this finding that the studying room and dining room has same odors.

According to our results, new studies are necessary. In new studies the quality and quantity of odors must investigate too. Because of a decision of the dean's office, we cut our study. According to the decision, it is forbidden that to make exam in the dining room.

KAYNAKLAR

- Hopfield JJ: Olfactory computation and object presentation. Proc Natl Acad Sci USA, 88(15): 6462-6, 1991.
- Zalaquett C, Thiessen D: The effects of odors from stressed mice on nonspecific behaviour. Physiol Behav, 50(1): 221-7, 1991.
- Shukla NP: Air pollution by odor sources, identif,cat,ion and control. Rev Environ Healt, 9(4) : 239-44, 1991.
- Shim C, Williams MH Jr: Effect of odors in asthma. Am j Med, 80(1): 18-22, 1986.
- Rotton J, Barry T, Frey C, Soler E: Air pollution and interpersonal attraction. J App Soc Psychol, 8:57-71, 1978.
- Pounds L: Holistic aromatherapy and massage. Beginnings, 12(3): 1-4, 1992.
- Smith DG, Standing L, deMan A: Verbal memory elicited by ambient odor. Percept Mot Skill, 74(2): 339-43, 1992.
- Ehrlichman H, Halpern JN: Affect and memory: effects of pleasant and un pleasant odors on retrieval of happy and unhappy memories. J Pers Soc Psychol, 55(5):769-79, 1988.
- Bowley RM, Mergler D, Huci G, cone SF: Aftermath of a chemical spill: psychological and physiological sequelae. Neurotoxicology, 15:723-9, 1994.
- Sunders RL Jr, Halpern GM, Gershwin ME: Odor associated idiopathic anaphylaxis. Allergol Immunopathol Madr, 23:35-7, 1995.