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Behaviour and Attitudes of Students Towards Environmental Issues at Faculty of Agriculture, Turkey

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Abstract: The aim of this study was to assess environmental attitudes and behaviour of students at Faculty of Agriculture in Çukurova University, Turkey. 240 undergraduate university students were surveyed. It was found out that majority of students (80.0%) used public media as a main source of information about environmental issues. Rural students were more concerned about environmental issues than urban ones while male students were more reluctant to environmental issues than female students. It was also determined that younger students were more concerned about the environment and had positive behaviour toward environmental issues. Unfortunately only 12.9% of students were a member of environmental organizations and had positive behaviour and attitudes regarding environment.

Key words: Environment, education, attitude, behaviour, gender

INTRODUCTION

During the last 30 years, environmental issues have become increasingly important for people throughout the world^[1]. The major environmental problems that the world faces are deforestation, loss of biodiversity, ozone depletion, global climate change, pollution and over-consumption of natural resources^[2]. Protecting the environment is important because long term consequences affect people's life significantly^[3].

Previous studies had focused on environmental awareness instead of trying to change people's attitudes and values about it^[4]. Attitude has been defined as a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object^[5] (p.6). From this perspective, environmental attitude defined as a learned predisposition to respond consistently favorable or unfavorable manner with respect to the environment^[1] (p.1).

As declared in Agenda 21, universities are straightforwardly challenged to increase their responsibility in developing an environmentally literate citizen. Furthermore, universities were particularly asked to play a prominent role in preparing citizens to analyze and resolve environmental issues^[6]. Universities are obligated to help students to be a part of society while they are also assumed to be leader in creating a culture of environmental stewardship in our society^[2].

Universities educate young generations whom are expected to be future leaders of many areas whom decisions on environmental issues could affect the sustainability of our existence. That is why; universities should pay considerable attention to environmental issues while education tomorrow's leaders whom attitudes toward resources, environment and quality of life would matter great deal in the future world^[7].

From this point of view, the aim of this study was to evaluate undergraduate students' environmental attitudes and behaviour at Agriculture Faculty in Cukurova University, Turkey. The study also explored the relationship between participants' attitudes, behaviour and demographic variables. These research results should be considered to take necessary action toward education on environmental issues if student's awareness doesn't meet the desired level.

MATERIALS AND METHODS

The population for this study was freshman, sophomore, junior and senior students at faculty of agriculture. This study was conducted during the spring semester in 2003. A total of 240 undergraduate students from faculty of agriculture were randomly selected and students responded voluntarily. Four part questionnaire was compiled to assess students' environmental behaviour, attitude, information sources and demographic

information. Most of the survey questions in part I and part II about behaviour and attitude toward environment were adopted from previously published instruments, especially Environmental Literacy Survey^[8-10].

Part I of the questionnaire comprises a five point Likert-type items (strongly agree to strongly disagree). The highest possible total score is 35, which aims to assess behaviour of students and Part II of the questionnaire comprises a five point Likert-type items (always to never). The highest possible score is 60, which aims to assess students' attitudes toward environment. In Part III several information sources were presented (TV, radio, newspaper, brochures, friends, family members and journals) and students' were asked to select their main information sources to obtain information about environmental issues. Last part of the questionnaire was related to students' demographical variables (age, gender, education level, raised place, memberships to environmental organizations).

To assess students' general characteristics on environmental attitudes and behaviour, descriptive statistics were generated. ANOVA procedures were used to examine whether or not students' environmental attitudes and behaviour were related to their rank in education (freshman, sophomore, junior and senior) and raised place (urban, rural and suburban). Then, using Scheffe procedure post hoc comparisons were conducted to see the differences among groups. To examine the relationship between gender and environmental organizations membership, mean scores were computed and compared using independent sample t-test. The statistical significance level was set at the 0.01 level. Finally, the relationship between age and students' environmental attitudes and behaviour were analyzed with using Pearson's correlation.

RESULTS AND DISCUSSION

53.3% of surveyed students were male. The average age of respondents was 21.85 year. More than half of the students 51.3% were raised in urban while 22.1% in rural and 26.7% of them in suburban areas. Senior students 30.0% made up the largest group of students by rank (freshman 22.1%, sophomore 24.2%, junior 23.8%). Out of 240 students, only 12.9% of them are the member of environmental organizations. Similar result was found at Ankara University, Turkey^[11]. Only 22.5% of students believe that they have considerable knowledge about environment. Majority of students indicated that their university did not provide satisfying information about environmental issues and 86.7% of them wanted to attend meetings, conferences, seminars or symposiums related to environment at the university. 80.0% of the students indicated that public media is (newspaper, TV and radio) the main source of information about environmental issues. Similar results were found in another study^[12]. Environmental organizations took second place in the list of important information sources with 15.0% and only 5.0% students stated that friends and family members played an important role in receiving information in environmental issues.

Students' behaviour toward environment was measured by responses on a 9 item Likert-type scale. The mean score of the items in the scale represented the student's behaviour toward environment. The response categories for this scale ranged from one (always) to five (never). Table 1 shows the distribution and average score of students on the behaviour toward environmental statements. Student's attitude toward environment was measured by responses on a 7 item Likert type scale. The mean score of the items in the scale represented the

Table 1: Means and standard deviations of the statements for the total sample

Statements	Mean±SD
Behaviour:	
I turn off the lights when they are not being used to save electricity.	1.71±0.87
I avoid purchasing product that are over packaged.	3.11±0.98
I talk to people when they harm the environment in an effort to persuade that person to stop that activity.	2.83±0.80
I recycle paper, glass, plastic and metal waste products at home.	3.76±1.07
I recycle paper, glass, plastic and metal waste products at school.	3.98±0.89
I purchase organic fruits and /or vegetables.	2.92±1.02
I do not run the water when I brush my teeth.	3.23±1.41
I do not use paper towel.	2.80±1.23
I talk to my family and friends about they can do to help solve environmental problems.	3.05±1.11
Attitude:	
I am concerned about the issue of deforestation.	1.44±0.66
Conserving water is important to me.	1.78±1.01
More controls should be placed on industry and agriculture to protect the quality of environment.	1.63±0.88
There are enough laws to protect the environment.	4.08±0.90
I would oppose any environmental regulations that would restrict my way of life.	2.16±1.17
I enjoy watching TV programs related to environmental issues.	1.61±0.71
It does not make difference if I do not turn off the lights in classroom because many other lights are in use at campus.	1.85±0.98

student's attitude toward environment. Each of the value-items was from one (strongly agree) to five (strongly disagree). As with previous researches^[13-15] a moderate correlation ($r = 0.37$) was found between attitudes and behaviour.

In addition to demographic variables, relationships between environmental attitudes, behaviour were analyzed. No significant differences were found between the environmental behaviour scores for males and females. However, significant difference were found between the environmental attitude scores for males and females ($t = 1.941$, $df = 236$, $p < 0.01$). As for environmental attitudes, male students were more reluctant to environmental issues than female students. Similar findings were found by other researchers^[16-18] that females more concerned about environment than men. No significant differences were found between students' attitude scores when their educational level ranked. However, significant differences were found between students' behaviour scores and rank in education ($F = 4.174$, $df = 3$, $p = 0.00$). Post hoc comparisons using Scheffe procedure were conducted to evaluate pairwise differences in behaviour among students education level. Results showed that the mean score of students' behaviour at freshman level was significantly higher ($p < 0.01$) than junior. No significant differences were found between students' attitude scores when their raised placed ranked urban to rural. However, significant differences were found between students' behaviour scores and their raised place. Scheffe procedures were showed that the mean score of students who raised in rural place was significantly higher ($p < 0.01$) than raised in urban areas. T-test was used to analyze the differences between students' environmental attitudes, behaviour and membership of environmental organizations. Behaviour scores were significant between members and non-members students ($df = 237$, $F = 0.239$, $p < 0.01$, $t = 2.60$). Also a significant differences were found between attitude scores for members and non-members students ($df = 236$, $F = 1.027$, $p < 0.01$, $t = 2.050$). Member students of environmental organizations had a positive behaviour and attitudes toward the environment. Students' environmental behaviour was significantly related to their age ($r = 0.18$, $p < 0.01$). But students' attitudes toward environment had no relation with their age ($r = 0.12$, $p > 0.01$).

CONCLUSIONS

It was found that Turkish agricultural students held positive attitudes toward the environment. But most importantly, students are willing to learn more

about it by attending conferences, seminars or symposiums about environmental education. More educational activities should be offered at the university.

Sources are very important to disseminate new information. In this study, it was found that students used different information sources but mainly TV, newspaper and radio. Thus, the educational value of these sources should be maximized. Especially, TV has been a powerful tool for changing attitudes of people^[19].

To be a member of environmental organization made a valuable difference about attitudes and behaviour of students regarding environment. Students should be encouraged to be a member of environmental organizations and to take actions to protect environment with non government organizations. Finally, more environmental educational courses should be offered at faculty of agriculture.

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