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Awareness Assessment of Preserving a Healthy Environment and the Role of Health Education in Promoting it Among Kuwait University Students

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Abstract

This study aims to assess awareness of preserving a healthy environment and the role of health education in its promotion among Kuwait University students. A survey questionnaire was distributed randomly to a sample of 300 students. It consisted of 26 statements; covering two domains: assessing awareness of preserving a healthy environment, and the role of health education in promoting it among Kuwait University students. Descriptive and qualitative statistics were used to analyze the data. Computer data entry and analysis were done by using SPSS. For data analysis, t-test and One Way ANOVA test were used.

Results of the study revealed a general lack of awareness among college students about preserving a healthy environment. Statistical analyses showed significant differences in some domains in relation to some variables in the study.

Key words: Awareness Assessment, Kuwait University Students, Preserving Healthy Environment, Health Education.

Introduction

Healthy environment is an understanding of the external environment and the role that people perform in it and help in improving environmental conditions. The World Health Organization (WHO, 2012) defines environment, as "all the physical, chemical, and biological factors external to a person and all the related behaviors". The

environment affects human quality of life, and years to live a healthy life (Kinney, 2008). Al-Adili and Al-Harahisha study (2013) aimed to reveal the effect of environmental education on the attitudes of Ahl al-Bayt University students, towards some issues related to environmental safety, in the light of some variables. The environment is attributed to the study of markets in environmental education and the experimental group, due to the interaction between gender and the academic level on the other hand, the results did not show the safety of the environment due to gender or academic level. Over the last few decades, Kuwait has experienced rapid socioeconomic and infrastructure development. The steady increase in its population, human activities, transportation fleet and power demand has contributed to environmental air pollution in Kuwait. The major sources of air pollution in Kuwait include petro-chemical plants, power plants, refineries and gasoline and diesel vehicles. An assessment of ambient air quality in two major cities in the State of Kuwait was made; (Al-Awadi, 2014). Another study aimed at revealing the level of environmental awareness among students and teachers at Zarqa Private University and its relationship to some variables, including studying a course related to students, the test distribution service, and the results revealed a low level of environmental awareness among the study members and in general, the results also showed no effect on Statistical significance of a study variable of a course that learns by the environment in the environmental awareness of the study members; (Al-Adili, 2010).

The State of Kuwait faces a growing risk of health-related problems due to the poor air quality originating from its various industrial and domestic activities. Dust stemming Atmosphere from adjacent deserts passing through areas containing industrial emission sources may carry both living (biogenic) and nonliving (chemical) constituents. Regular monitoring and careful statistical examination of all measured air pollutants could help in maintaining a clean healthy environment and resolving pollution-related problems in a timely manner; (Al-Salem, 2008).

The researchers assert that environmental education is the study of environmental issues that lead to the implementation of the goals of protecting the environment and protecting people from dangers. Development is a set of overlapping knowledge that aims to improve the

quality of life and its close relationship to the idea of lifelong education, (Al-Mubarak, 2015). Environmental education and awareness contribute to developing the capabilities of thinking and finding future solutions. The complex aspect in environmental education lies in the field of documenting the relationship between man and the biosphere as well as active participation in economic, social and political development (Al-Hashem, 2016).

Importance of Health Education in promoting a healthy environment

Healthy environment helps people reduce poor health habits and encourage positive improvements, health education and promotion include educational, organizational, and environmental assistance; (Cottrell, Girvan & McKenzie, 2015); (Lahnstein, 2017). Environmental variables play a basic role in nearly every human disease. Pathogenic organisms have posed the largest health concern in the environment, affecting people's health (James, 2009). In university courses on "Health and Hygiene," practices such as sanitary waste disposal and other behaviors that enhance environmental hygiene should be taught to college students, (Dillon, 2016). Individuals, rather than circumstances, have been the focus of the majority of health promotion programs done at universities and community settings. Rather than providing natural resources and treatments that promote better well-being among residents of a region, they have been designed to change college students' health habits and lifestyles; (Bani-Faris, 2011).

Al-Asmari study (2012) aimed at determining the environmental concepts that need to be included in the books of social studies and their availability in those books. Content analysis was used to reveal the availability of a list of environmental concepts. The results showed that the degrees of appreciation of the members of the sample group, because they include environmental concepts as a confrontation between medium and weak for not including some of the important environmental concepts contained in this study in the textbooks. Students' personal habits help improve physical health and minimize the risk of sickness and should be the subject of health promotion research; (McKenzie and Thackeray, 2013). The importance of environmental trends for future study on the establishment and management of

health-promoting environments cannot be overstated. Behavior modification techniques should be the focus of health education and promotion research; (Al-Qahtani, 2010).

Global environmental issues are environmental concerns that can affect people's health; (Berryman and Sauvé, 2016). Five environmental issues that interest many people around the globe are population growth, poverty and hunger, the greenhouse effect, global warming, and the ozone layer; (Kreuter et al., 2004).The environment is everything around a person, it includes the air we breathe, the water we drink, the noise we hear, in addition to the social and the technological environment. Environment is an important part of people's everyday lives. Pollution of the environment poses a major hazard to human health. Breathing polluted air increases the risk of heart attacks and respiratory illnesses. The intensity and length of the exposure, as well as the person's age and overall health, are all critical factors (Morrison, 2018).

This study will assess awareness of college students attending Kuwait University in preserving a healthy environment, and the importance of health education in promoting it.

Questions of the study:

The current study attempts to answer the following questions:

Q1-To what extent college students at Kuwait University perceive factors related to awareness about preserving a healthy environment?

Q2- To what extent college students at Kuwait University perceive factors related to the importance of health education in promoting a healthy environment?

Research hypotheses

1 - There is no significant difference in assessing college students' environmental awareness students due to Gender.

2 - There is no significant difference in assessing college students environmental awareness due to Age.

3 - There is no significant difference in assessing college students' environmental awareness due to Level of study (freshman, sophomore, junior, senior).

4 - There is no significant difference in assessing college students' environmental awareness due to major (humanities\ science).

Objectives of the study

The current study aims to achieve the following:

1 - To modify college student's health habits and lifestyles.

2 - To assess factors in the social and physical environment that interact with college students' behavior to produce health effects or quality-of-life outcomes towards environment.

3 - To build skills and attitudes based on awareness of the concepts in which the educational curriculum is exposed. Environmental concepts are determined on

the basis of scientific psychological and mental criteria, and in a specific order that a student is asked to learn its aspects and not to interfere with other concepts of fields of knowledge such as social studies and arts in the education stage, while universities set special courses for environmental education for their students, including the integration of fields of knowledge with the environment in a special entity of environmental education; (Al-Ghamdi, 2016).

Importance of the study

The environment affects the quality of people's lives. Health education help modifying behaviors, attitudes, and values of college students by introducing environmental health-enhancing activities between them and to reduce health problems''; (Morrison, 2018). Some measures must be taken in the strategic plan to integrate environmental education into the general education system and to re-purpose the curriculum in the general education stages in order to achieve integration between its topics and environmental education topics and to include courses, programs and activities for environmental education within the study plan in the faculties of education; (Minkler, Vasquez, Tajik, and Peterson, 2008).

This study is an effort to find suggestions and solutions for college

students to help them solve environmental, social, and technological problems that affect their health, and will help find new active prevention programs for promoting environmental health between college students.

Definitions of terms

Environment: is defined as "all the physical, chemical, and biological factors external to the human body, and all the factors related to health and behaviors"; (WHO, 2012).

Health Education: "any combination of planned learning experiences using evidence based practices and/or sound theories that provide the opportunity to acquire knowledge, attitudes, and skills needed to adopt and maintain healthy behaviors"; (Morrison,2018).

Healthy environment: refers to "an appreciation of the external environment and the role that individuals play in improving environmental conditions"; (Andy and Shew, 2018).

Assessment: "the estimation of the relative magnitude, importance, or value of objects observed"; (Kreuter et al., 2004).

Literature Review

Various hypothetical systems have been created to clarify the hole between the ownership of ecological information and natural mindfulness, and showed supportive of ecological conduct; (Anja and Julian, 2010). These examinations demonstrate the variables that have been found to have some impact, positive or negative, on supportive of natural conduct like segment factors, outside factors (for example institutional, monetary, and social) and inner elements (for example inspiration, favorable to ecological information, mindfulness, values, perspectives, feelings, duties and needs) Morrison (2018). Al-Ghamdi study (2016) aimed to reveal the environmental trends among university students, and the study showed that the attitudes of students in Taif were positive. Al-Mubarak study (2015) aimed at generalizing the concept of environmental awareness among students of the College of Education at Bakht Al-Ruda University. One of the most important findings of the study was working to spread environmental awareness between human rights organizations, governmental and non-governmental organizations in solving their problems and educational organi-

zations include environmental education in the curricula of public and higher education in a better way than it is now, and it is necessary to provide publications and audio-visual media on the concept of various environmental issues.

Al-Dosari study (2014) aimed to explore the reality of including environmental education in public education in the Kingdom of Saudi Arabia, specifically the environmental problems to be addressed, to identify the difficulties facing the inclusion of environmental education and to identify the entrances to securing environmental education in the school curricula.The results revealed that there is no environmental education taught in public education in the Kingdom of Saudi Arabia, which is called the independent entrance, and that the curricula in general did not deal broadly and comprehensively with aspects of environmental education, and did not include draft topics on environmental problems and did not address them.

US Environmental Protection Agency (USEPA, 2010), sets double aims: the first, to clarify informatively between the public in general including college students, about natural environments and connections among people and their current circumstance, including ecological issues, and second, to urge understudies to seek after vocations identified with the climate. Explicit destinations proposed to meet these objectives incorporate fostering an attention to and appreciation for our common and social climate. Information on essential natural ideas, an associate with a wide scope of current ecological issues, and involvement with utilizing analytical, basic reasoning, and critical thinking abilities between understudies in taking care of natural issues; (Lahnstein, 2017). Andy and Chew (2018) revealed in their study that advancing supportive of ecological conduct locally in Singapore from bringing issues to light to social change between students. The discoveries recommend that with better arrangement (information) about the environmental change issue, students can settle on educated choices (mentality) and be urged to receive favorable to natural conduct activity.

Bradley, Waliczek & Zajcek (2010) investigated in their study the relationship between attitudes toward the environment and informative knowledge of college students. A questionnaire was administered to the students at the start of a 10-day nature science course. Results showed

critical contrasts in both information gain and mentalities of understudies after openness. Understudies' natural information scores expanded by 22% after they finished the ecological science course and understudies' natural mentalities turned out to be all the more earth good, it was discovered that understudies having higher information scores had more great ecological perspectives contrasted and understudies with lower information scores.

Past assessments showed that numerous understudies and students need adequate ecological information and exhibit uplifting perspectives towards the climate; (Plamberg, 2010). This absence of information is accepted to add to the absence of supportive of ecological practices among them.

In his research, Norizan (2010) estimated the ecological information, mentality and practices of pre-administration optional instructors selected an undergrad science showed techniques course. The outcomes demonstrated the status of these educators to understand the objective of the instructing of science in schools and the requirement for more coordinated exertion in instructor training to set them up for their part in teaching about the climate.

In a study made by Kuhlemeier, Bergh & Langerweig (2010) to explore ecological information, mentalities & behavior in Dutch Secondary Education, ecological data, natural perspectives, and earth-conscious behavior were all taken into account. There was a link between environmental attitudes, a desire to perform personal penances, and naturally trustworthy behavior. Environmentally capable behavior was more strongly connected with willingness to make penances than with demeanor toward the climate, which was predictable with hypotheses on views. In another study (Jensen & Schneck, 2006), the idea of activity capability is introduced to find it inside the idea of general instructive hypothesis. They contended that the idea of activity and capability ought to involve a focal situation in the hypothesis of nature instruction as a large number of the urgent instructive issues concerning political liberal training are joined in this idea. Dhitinut, Stephen, Wendi and Alicia (2011) contended that one's information, insight, and disposition are essential in deciding how one acts in regards to ecological risks. While science has taken incredible steps in advancing natural wellbeing, dangers actually exist, generally because of individual

activities in light of potential wellbeing perils. In this study, college understudies (n = 395) took a crack at an initial wellbeing instruction course partook in a natural wellbeing mindfulness study inspecting information, mentalities, and practices. Results demonstrated that there was an overall absence of information among undergrads, about ecological wellbeing related issues. What's more, it was resolved that guys were bound to have uplifting perspectives towards issues identifying with air quality and the climate. Tikka, Kultunen & Tynys (2010) studied the attitudes of students with a variety of educational backgrounds towards the environment and nature. It was found that there were major differences between students. Female students showed more responsibility towards environment and students with biology major knew more and possessed a positive attitude towards environment.

Commenting on previous studies, it is clear from the diversity of studies that have been carried out in environmental awareness in general. They dealt with a conceptual framework. The differences between the present study and these studies, the absence of an empirical study conducted on the Kuwaiti society and its students at Kuwait University, to develop environmental awareness among its students, which is what distinguishes the current study, and the role of health education in raising environmental health awareness among Kuwait University students.

Validity and Reliability

Jury-Validity: The construct validity was ensured from the feedback on the survey, from six faculty members in the Department of Curriculum and Instruction. Accordingly, some questions were deleted and some questions were modified to clarify the wordings, and in the final form of the survey, there were only 26 items as mentioned above.

Reliability: Cronbach alpha coefficients were calculated to measure internal consistency and reliability for all items in the survey in the two following domains: environmental awareness, and role of health education. Cronbach alpha coefficients were 0.74 and 0.77 respectively, which showed a high reliability index, and high internal consistency of items, (table 1).

Appendix B

Table 1

Reliability (Cronbach's Alpha) for the various dependent variables

Variable	No. of Items	@	M	SD	Skewness	Kurtosis
Environmental Awareness	20	0.74	2.98	0.97	-0.02	-1.19
Role of Health Education	6	0.77	3.13	0.81	-0.29	-0.66

Number of Cases = 300

Methodology

Sample

The original population of the study consisted of undergraduate students attending humanities and sciences colleges at Kuwait University. A random sample was chosen. it consisted of three hundred students 20.28%, from different gender, age, educational level and college of study, to assess their awareness in preserving a healthy environment, and the importance of health education in promoting an appropriate environment. Table 1 showed that 172 of the respondents were female students 57.3%,while 128 were male students 42.7%, their age ranged from 18 to 26 years, 206 students 68.7% were aged 18-20 years, and 94 students 31.3% were aged 21years and above. The students' levels of study included 69.7% freshman &sophomore college students, 30.3% junior and senior college students. As of the college of study, 38.7% students were from Colleges of Humanities, and 61.3% students were from College of Science.

Table 2

Frequency distribution of demographical data

Variable Labels	Variable	Frequency	Valid %
Gender	Male	128	42.7
	Female	172	57.3
Age	18-20	206	68.7
	21and above	94	31.3
Level of Study	Freshman & Sophomore	209	69.7
	Junior & Senior	91	30.3
College of Study	Humanities	116	38.7
	Science	184	61.3

Instrument and Procedure

An Environmental Awareness Survey was randomly distributed to students attending Humanities and science colleges in Kuwait University, in the fall semester (2017-2018), to assess their awareness in preserving a healthy environment and the importance of health education in promotion. The survey was translated into Arabic. The total number of questionnaires was 350 distributed to a random sample of students attending both colleges of Humanities and Sciences, at Kuwait University. Permission was taken from doctors to distribute the survey to the students at the end of the lecture for different courses, to answer it and handle it. Some of the surveys were not fully answered and were skipped. The total number of completed questionnaires that were suitable for monitoring was 300. A survey related to environmental awareness was used; (Yenchen. 1991; Clarke, 1996). Computer data entry and analysis were done by using SPSS (Statistical Package of the Social Sciences). George and Mallery (2016). Data analysis included mean, standard deviation, t-test, and one way ANOVA test. The survey consisted of three parts: the first part, biographical information regarding student's gender, age, educational level, and major. The second part, to find the student's opinion of some parameters selected for measuring some aspects related to awareness about preserving a healthy environment, it consists of twenty items. The third part to find students' opinion of the importance of health education in promoting an

appropriate environment, it consists of six items. Answers to the survey were rated on a three-point Likert scale as follows: strongly agree, agree, and disagree.

Results

The results of the study demonstrated that there is an overall absence of information among undergraduate students, about ecological wellbeing related issues, and perceptions of college students' about awareness in preserving a healthy environment.

Table 3 showed the responses of questions concerning, Q1-to what extent college students at Kuwait University perceived factors about some selected aspects related to awareness about preserving a healthy environment. Most college students 72.7 % strongly agreed that it is important to get rid of wastes by throwing it in the designated areas for waste management. A high percentage of the students 70.0% strongly agreed that it's ok to litter in the streets, whereas 65.7% of the students agreed that it is their responsibility to protect the environment, and 65.7% disagreed that disasters and earthquakes should be always expected. 58.3% strongly agreed that it's their responsibility to take care of the environment, and 58.3% agreed that it's important to help the people who are responsible for environmental protection. Over the last few decades, Kuwait has experienced rapid socioeconomic and infrastructure development. The steady increase in its population, human activities, transportation fleet and power demand has contributed to environmental air pollution in Kuwait. The major sources of air pollution in Kuwait include petrochemical plants, power plants, refineries and gasoline and diesel vehicles. Al-Enezi, Al-Dousari & Al-Shammari (2009) conducted an assessment of ambient air quality in two major cities in the state of Kuwait. Results indicated that 52.6% disagreed that it's the individual responsibility for providing pure water. 50.7% agreed that the main enemy for the environment is people's neglect, while 47.7% agreed that solving environmental problems resulting from pollution are very costly.

Albassam, Khan & Popv (2009) studied three pollutants, namely, CO, NO2 and Non-methane Hydrocarbons (NMHCs), in the vicinity of a congested area in Kuwait. They concluded that long-term exposure to these particulates could cause serious respiratory effects 47.0% agreed

that government should protect the area from pollution resulting from industrial smokes and gases, Kuwait Environmental Public Authority (K-EPA), maintains several distributed air quality monitoring stations to atmosphere that achieve an adequate area coverage, to observe variety land use changes and developments, i.e., industrial and residential. Also it included the probable effect of industrial and transportation (traffic) effluents on the air quality; (Al-Mutairi & Koushki, 2014). A study demonstrated that traffic was the major source of air pollution in the district adjacent to Kuwait City center, while oil refineries contributed the most to the ambient air pollution level in a rural district, (Al-Awadi, 2014), while 46.3% agreed that providing pure drinking water is very important, as a desert area with a scarcity of fresh water, its main source of fresh water is desalinated sea water, Kuwait hosts three main desalination plants. Furthermore, the area is affected by severe dust storms during the summer season, which highly contribute to pollution in this area; (Al-Enezi, Al-Dousari & Al-Shammari, 2014), while 45.3% agreed that environmental disturbance is very harmful to our health, 45.3% agreed that the best way to protect the environment is by law, 44.3% strongly agreed that any person who cut a tree or abuse the environment should be punished, 43.3% strongly agreed that using natural resources reasonably will help keep it available longer, 42.7% strongly agreed that the government is responsible to protect of the environment, 37.7% agreed that it's not important to worry about environmental problems.

Table 3

Percentage Distribution of Student's Perception About a Healthy Environment Percentage %

Items No.	Variable Labels	Strongly Agree	Agree	Disagree
Q1	It's our responsibility to protect the environment	33.7	65.7	0.6
Q2	The main enemy for the environment is people's neglect	39.3	50.7	6.4
Q3	It's ok to litter in the streets	70.0	16.7	17.3
Q4	We are all responsible to take care of the environment	58.3	36.0	3.0

Table 3 Cont.

Percentage Distribution of Student's Perception About a Healthy Environment Percentage %

Items No.	Variable Labels	Strongly Agree	Agree	Disagree
Q5	-No need to protect natural resources	39.7	43.0	9.0
Q6	Environmental protection is the government responsibility	42.7	40.3	19.0
Q7	Disasters and earthquakes should be always expected	7.3	13.3	65.7
Q8	Technological advance is affected by the methods used In environmental protection.	21.0	30.3	37.3
Q9	Any person who cut a tree or abuse the environment should be punished	26.7	44.3	18.3
Q10	Providing pure drinking water is very important	23.3	46.3	13.7
Q11	The individuals themselves should be responsible for providing Pure water	13.0	24.0	52.6
Q12	The government should protect environmental pollution resulting From industrial smokes and gases.	28.7	47.0	16.7
Q13	Throwing wastes in the running water is the best way to get rid of it	507	11.0	72.7
Q14	Solving environmental pollution problems are very costly	26.7	47.7	9.4
Q15	It's important to help the people who are responsible For environmental protection.	24.3	58.3	10.6
Q16	Environmental disturbance is very harmful to our health	38.0	45.3	9.0
Q17	Using the natural resources reasonably will help keep it available longer	43.3	42.0	9.4
Q18	The best way to protect the environment is by law	44.3	45.3	5.7

Table 3 Cont.

Percentage Distribution of Student's Perception About a Healthy Environment Percentage %

Items No.	Variable Labels	Strongly Agree	Agree	Disagree
Q19	Protecting agriculture from pollution is important	29.3	34.7	24.4
Q20	It is not important to worry about environmental problems.	26.3	37.7	25.3

The Role of Health Education in Promoting a Healthy Environment

Table 4 shows the responses to the question concerning Q2- To what extent college students at Kuwait University perceived factors related to the importance of health education in the creation and maintenance of a healthy promoting environment. Findings show that 70.0% agreed and recognized that health education is essential in solving environmental problems, and 51.3 % agreed that it's important to integrate environmental awareness in teaching, whereas most students 51.0% agreed that health education and promotion is important to protect the environment, while 47.3% agree that a course or unit about environmental health should be offered at the university level, and 31.3% agree that the next generations are more aware about preserving the environment due to scientific advance. Only 30.3% agree that environmental education will help protect natural resources from expiration.

Table 4

Percentage Distribution of Students' Perceptions about the Role of Health Education in Promoting a Healthy Environment Percentage

Items No	Variable	Strongly Agree	Agree	Disagree
Q1	Environmental problems can be solved by education	17.7	70.7	11.0
Q2	Health education & promotion is important to protect the environment	40.3	51.0	4.7

Table 4 Cont.

Percentage Distribution of Students' Perceptions about the Role of Health Education in Promoting a Healthy Environment Percentage

Items No	Variable	Strongly Agree	Agree	Disagree
Q3	The next generations are more aware about preserving the Environment due to scientific advance	15.3	31.3	26.3
Q4	Environmental Education will help protect natural resources From expiration	29.0	30.3	31.4
Q5	It's important to teach college students health education and Environmental Pollution and its effect on health	30.0	51.3	11.0
Q6	A course or unit about environmental health should Be offered to college students at the university	30.3	47.3	10.0

T-TEST for Various Dependent Variables by 'Gender':

Q3 results show no significant difference in the opinion of students about environmental awareness referred by Gender (Male, Female).Table 4 results show that the t-value is significant, t (298) = - 2.28, p < .05 (p = .023). The mean values showed that female, (M = 3.782, SD = .448) perceptions towards preserving a healthy environment were more than male (M = 3.663, SD = .445). Also, the t-test was significant, t (298) = -1.998, p < .05 (pp = .047). The mean values showed that female (M = 3.67, SD = .350) were more aware about preserving a healthy environment than male, (M = 3.60, SD = .320). Regarding the important role of health education to modify health habits and behavior towards the environment, Table 5 results show that t-test was not significant, t (298) = -1.334, p > .05 (p = .183), but the mean values showed that female (M = 3.83, SD = .432) agreed more in their opinion about the importance of health education in promoting a healthy environment "than their male counterpart students did. (M = 3.76, SD = .486).

Table 5

T-TEST for Perception & Awareness of Variables referred by Gender (Male, Female)

Variables Name	Gender	N	Mean	SD	T	DF	Sig (2tailed)
Perception towards the environment	Male Female	128 172	3.66 3.78	0.445 0.448	- 2.281	298	.023*
Awareness about environment	Male Female	128 172	3.60 3.67	0.320 0.350	- 1.998	298	.047*
Importance of health education	Male Female	128 172	3.76 3.83	0.486 0.432	- 1.334	298	0.183

*** Significant difference at the 0.05 level ** Significant difference at the 0.01 level**

T-TEST for Various Dependent Variables by 'age'

Q4 results show no significant difference in the opinion of students about environmental awareness attributed to age. Table 6 results show a significant difference in the awareness of a healthy environment between students within the age range less than 20 years or more, t 298 = 3.33, P < 0.05 (P = .001), the mean values showed that the students aged 20 years or less and 21 years or above have the same perception towards healthy environment (M = 3.73, SD = .454).

Regarding the important role played by health education to modify individuals health habits and behavior towards the environment, table 6 results show that the t-test value is not significant, t (298) = .533, P > 0.05(P = .595), but the mean values indicate that students aged 20 years or less (M = 3.81, SD = 0.430) agreed more in their opinions about the importance of health education in promoting a healthy environment" than students aged more than 20 years old did; (M = 3.78, SD = .430).

Table 6

T-TEST for Perception & Awareness among Variables referred By Age

Variable Name	Age	N	Mean	SD	T	DF	Sig (2-tailed)
Perception towards environment	Up to20 More than 20	206 94	3.73 3.73	0.454 0.442	.007	298	0.994
Awareness about environment	Up to20 More than 20	206 94	3.68 3.55	0.347 0.303	3.33	298	0.001**
Importance of Health education	Up to 20 More than 20	206 94	3.81 3.78	0.468 0.430	0.533	298	0.595

*** Significant difference at the 0.05 level ** Significant difference at the 0.01 level**

T-TEST for Various Dependent Variables by 'level of study':

Q5 results show no significant difference in the opinion of students about environmental awareness referred by Level of study (freshman, sophomore, junior, senior). Table 7 results show that the t-test was significant, t (298) = - 2.152, $p < .05$ ($p = .032$). The mean value shows that junior and senior students (M = 3.815, SD = .358) agreed more about their "perception towards healthy environment" than freshman and sophomore students, (M = 3.695, SD = .481). The results show that freshman and sophomore students have more awareness about healthy environment, (M = 3.666), SD = .344), than junior and senior students, (M = 3.599, SD = .325). The results, also, show that students in both groups admitted equally the fact that health education plays an important role in promoting the value of healthy environment among them; (M = 3.80).

Table 7

T-TEST for perception & Awareness among Variables referred by Level of study

Variable Name	Level of Study	N	Mean	S.D	T	DF	Sig. (2-tailed)
Awareness towards the environment	Freshman & Sopho-more	209	3.69	0.481	-2.152	298	0.032*
	Junior & Senior	91	3.81	0.358			
Awareness about the environment	Freshman & Sopho-more	209	3.66	0.344	1.584	298	0.114
	Junior & Senior	91	3.59	0.325			
Importance of health education	Freshman & Sopho-more	209	3.80	0.451	-.013	298	0.989
	Junior & Senior	91	3.80	0.470			

****Significant difference at the 0.05 level ** Significant difference at the 0.01 level**

T-TEST for Various Dependent Variables by 'Major'

Q6 results show no significant difference in the opinions of students about environmental awareness that may be referred to major (humanities, sciences).

Table 8 results show that the t-test was not significant, t 298 = -.252, P >.05 (P =.801). The mean value shows that Science students (M = 3.739, SD =0.478) agreed more about their ''perception towards healthy environment" than humanities students, (M = 3.726, SD =.433). The results, also, show that science students possessed more awareness about preserving a healthy environment, (M=3.673), SD=0.377), than humanities students, (M=3.629, SD=0.312).The results show that students in both groups admit that health education

plays an important role in promoting healthy environment between them, but science students are more aware of this fact, (M = 3.828, SD = 0.457) than humanities students (M = 3.784, SD = 0.456).

Table 8:

T-TEST for Perception & Awareness among Variables referred by Major

Variable Names	Colleges	N	Mean	S.D.	T	df	Sig. (2-tailed)
Perception towards the environment	Humani-ties	184	3.72	0.433	.252	298	0.801
	Science	116	3.73	0.478			
Awareness about the environment	Humani-ties	184	3062	0.312	1.108	298	0.269
	Science	116	3.67	0.377			
Health edu-cation	Humani-ties	184	3.78	0.456	.806	298	0.421
	Science	116	3.82	0.457			

*** Significant difference at the 0.05 level ** Significant difference at the 0.01 level**

Discussion

The purpose of the study is to assess awareness level of college students attending Kuwait University in preserving a healthy environment, and to explore their opinions about the importance of health education in promoting a healthy environment. Results demonstrated an overall absence of information among undergrad students, about ecological wellbeing related issues. Ratnapradipa et al. (2011) investigated in their study the link between environmental attitudes and informative knowledge of the students in the College. Results showed critical contrasts in both information gain and mentalities of understudies after openness; (Bradley et al., 2010). Female students showed more responsibility towards environment and students with biology (science) major knew more and possessed a positive attitude towards environment. However, concerning other variables related to college

students' age, and year of study, previous studies didn't test the perception of the students about awareness among them in preserving a healthy environment and the role of health education in promoting a healthy environment, (Morrison, 2018). Some measures must be taken in the strategic plan to integrate environmental awareness into the general education system in Kuwait University and to redirect the curriculum in the general education stages in order to achieve integration between its topics and environmental education topics and to include courses, programs and activities for environmental education within the study plan in the colleges of education.

Kuwait University must take the lead in introducing environmental education courses to its students during their freshman year. It suggested that courses need to be obligatory for students in all colleges to meet their needs, to enhance environmental awareness and protection between them. Health promotion should focus on modifying and identifying college students personal behaviors that enhance healthy environment and reduce the risk of illness. There is a need for college students' involvement in enlightening them about how to practice healthy hygiene by offering them courses in environmental health promotion and health education, to increase their awareness level towards preserving a healthy environment, by providing them with more guidelines about how to protect the environment and to follow a comprehensive health education approach related to environmental education.

Conclusion

This research aims to assess awareness of preserving a healthy environment of Kuwait university students, regarding important matters related to preserving a healthy environment. This includes emphasizing the importance of environmental culture and the inclusion of environmental education courses, programs and activities within the study plan in the colleges of education, emphasizing the need to develop environmental awareness among students in the university, and teamwork through the involvement of all community institutions related to the environment, bodies, cultural clubs and institutions. Kuwait Minis-

try of Education emphasizes, also, the importance of promoting environmental awareness among students at all levels of Education in Kuwait, according to a well-studied and clear methodological plan.

Recommendations

The study concludes with recommendations, including emphasizing the importance of environmental culture and the inclusion of environmental education courses, programs and activities within the study plan in the faculties of education, pointing out the need to develop environmental awareness among students, and teamwork through the involvement of all community institutions related to the environment, cultural clubs and institutions.

The study proposes the following recommendations:

1 - Preparing a strategic plan for studying environmental education within the educational system that includes objectives, programs, and implementation of activities, taking into account students capabilities, recovery tendencies, and their university level.

2 - Developing environmental awareness strategies and programs to be used in benefiting from them and develop environmental awareness among students according to a well-studied and clear methodological plan.

3 - Conducting training courses to qualify teachers in educational institutions and universities specialized in environmental matters to raise their level in performing their role towards teaching them the concepts of the environment and raising their promise of it.

4 - Conducting training programs to raise the level of environmental awareness among members of Kuwaiti society.

5 - Incorporating curricula and programs to dictate the environmental awareness through teaching health education in colleges, educational institutes and different universities in Kuwait, and in order to prepare and qualify future teachers experience in the fields of environmental education and rehabilitation.

6 - Emphasizing the importance of environmental culture and the need to develop environmental awareness among university students to raise the level of awareness among them. Environmental awareness

will make them able to positively coexist with the environment and benefit from global experiences in protecting and preserving the environment.

7 - Conducting similar studies in the different educational stages in Kuwaiti society that present a proposed conception to develop awareness of environmental concepts among university students: a study that presents recommendations to overcome the dangers of the environment and its determinants, a study on the difficulties facing the teaching of environmental concepts and ways to overcome them, a proposed program to develop university students' attitudes and present a proposed scenario to develop awareness of environmental concepts among them.

تقييم الوعي بالمحافظة على البيئة الصحية ودور التربية الصحية في تعزيزه لدى طلاب جامعة الكويت

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ملخص

هدفت هذه الدراسة تقييم الوعي بالمحافظة على البيئة الصحية ودور التربية الصحية في تعزيزه لدى طلاب جامعة الكويت. لتحقيق هدف الدراسة تم تصميم استبانة مكونة من26 عبارة وزعت على محورين هما: تقييم وعي طلاب الجامعة بالمحافظة على البيئة الصحية ودور التربية الصحية في التوعية. تم توزيع الاستبانة عشوائيا على عينة اشتملت على 300 من طلاب جامعة الكويت. تم استخدام المنهج الوصفي التحليلي. ولتحليل البيانات تم استخدام الحزمة الإحصائية والمتوسطات الحسابية والإنحرافات المعيارية والتباين الأحادي واختبار (ت). أظهرت نتائج الدراسة انخفاض مستوى الوعي البيئي لدى الطلاب ومعرفة كيفية الحفاظ على البيئة الصحية. كما توصلت الدراسة إلى وجود علاقة ارتباطية موجبة دالة احصائيا بَين المتوسطات الحسابية تُعزى لأهمية الوعي البيئي الصحي بين الطلبة

الكلمات المفتاحية: تقييم الوعي البيئي، طلاب جامعة الكويت، المحافظة، البيئة الصحية، التربية الصحية.

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